

NETWORKED MEDIATED INFLUENCE 2.0

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MASTER OF MILITARY ART AND SCIENCE  
General Studies

by

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## ABSTRACT

NETWORKED MEDIATED INFLUENCE 2.0, BY LTC Richard Davenport, 101 pages.

Given the conversational nature of Web 2.0 platforms, should Military Information Support Operations (MISO) evolve from its traditional monologue approach of target audience engagement? I used a combination of qualitative analysis and abductive reasoning to analyze existing scholarship on the communications environment, and how contemporary networked social movements and non-state actors are leveraging Web 2.0 platforms to communicate. The critical point behind the justification for the Psychological Operations (PSYOP) community to leverage Web 2.0 platforms for communication is that information is becoming less centralized and more decentralized. This decentralization of information is causing a major shift in the control of information and due to this lack of centralized control more individuals, private organizations, and non-state actors are now in greater competition with the PSYOP community. This shift is in line with the concept of “many-to-many” communication where traditional consumers of information are now also producers of information. To better compete with these new realities the PSYOP community will need to better educate themselves on how to effectively use Web 2.0 platforms for engagement and influence. From this perspective I also analyze the use of various psychological theories and social network theories that apply directly to Web 2.0 platforms. This study has implications for how Joint, Interagency, Intergovernment, Multinational partners, policymakers, strategists, military commanders and planners think about and plan for Web 2.0 integration into all military operations for influence.

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## ACRONYMS

ICT	Information Communication Technology
MISO	Military Information Support Operations
PSYOP	Psychological Operations
TA	Target Audience



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## CHAPTER 1

### INTRODUCTION AND OVERVIEW

The key is not to look to the past and expect to see the present, but to identify in history the seeds of change and of the possible across time and space.

— Victor Davis Hanson, *Carnage and Culture: Landmark Battles in the Rise of Western Power*

Historical thought is using the knowledge of the past, to make decisions in the present, and to plan for the future.

— Rufus Fears, “Story of Freedom”

The U.S. Army is in the process of transitioning from the modern era to a new era in history. There is great potential that this transition will not be one of slow progress as was with the transformation period between the post-classical era to the modern era, or the early modern period. This early modern period spanned roughly four hundred years from the 15th century to the 19th century, and included some of the greatest revolutionary changes that the world has known. Of interest to the U.S. military is that much of the revolutionary changes that occurred during that era happened in a decentralized environment, much like what the U.S. military is facing today.

Some of the revolutionary changes that occurred during the early modern period including the Renaissance, the Age of Discovery, the ideas of the Reformation and Heliocentric thinking, and the revolutionary effects of the Gutenberg Press are happening again. Today we see a similar renaissance of greater educational progress happening globally through the Internet. It is an environment where more and more individuals are gaining access to information and therefore enhanced self-education. Today we also see greater globalization taking place through a highly connected world where the spread of

goods and services are happening faster and faster. We see revolutionary ideas and exponential technological growth in the areas of nanotechnology and artificial intelligence which will challenge humanity in terms of the ethical and moral realities tied to a “post human” world.<sup>1</sup> As with the Gutenberg Press and the massive spread of ideas, today we also see a similar social upheaval in the environment where social movements and non-state actors are spreading due to enhanced effects of social media platforms over the Internet. Now political power appears to be shifting from centralized states into the hands of diverse and decentralized groups who are putting more and more pressure on centralized governments. Many of the revolutionary upheavals that occurred during the transitional early modern period had much to do with the spread of information. Today, through the Internet and social media platforms, the world is creating and spreading information with revolutionary and exponential style effects.

The U.S. Army of today finds itself in an operational environment that is becoming more decentralized and more chaotic; an environment marked by the revolutionary spread of viewer-created content never before seen in history in terms of speed and scope.<sup>2</sup> Some of this has everything to do with Information Communication Technologies (ICTs) such as television, radio, cellular phones, computer and network hardware, and software. There are nearly as many cell phones (6.8 billion, 2013) than human beings (7.2 billion, 2014), and the global connections to the Internet continue to

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<sup>1</sup> Max Tegmark, “Humanity in Jeopardy,” *Huffington Post*, January 13, 2014, accessed March 10, 2014, [http://www.huffingtonpost.com/max-tegmark/humanity-in-jeopardy\\_b\\_4586992.html](http://www.huffingtonpost.com/max-tegmark/humanity-in-jeopardy_b_4586992.html).

<sup>2</sup> Nancy Baym, *Personal Connections in the Digital Age* (Malden, MA: Polity Press, 2010), 10.

grow where 2.7 billion (40 percent of world population, 2013) people are online.<sup>3</sup>

Additionally, these ICTs have become forms of new media in terms of digitized video, digitized audio, digitized images, and digitized text which private citizens have at their disposal through the Internet.<sup>4</sup> The world is highly connected and in this connectedness the spread of ideas is happening faster and faster, and with serious revolutionary implications.

These various forms of ICTs and new media continue to become more integrated into one, single, overarching backbone, the Internet. The Internet from its very inception was conceptualized, designed, and established in a decentralized manner.<sup>5</sup> Information is essentially power and the Internet has enabled a mass audience or the population to inherit practically unlimited amounts of information that was for centuries controlled by centralized, hierarchical states, organizations, and various media outlets.<sup>6</sup> This shift in information power, although not recognized initially by technologically advanced governments decades ago, has resulted in a significant rise in networked non-state actors and various networked social movements that put diverse degrees of pressure on existing

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<sup>3</sup> International Telecommunication Union, "ICT Facts and Figures," accessed February 28, 2014, <http://www.itu.int>.

<sup>4</sup> Thomas Rid and Marc Hecker, *War 2.0: Irregular Warfare in the Information Age* (Westport, CT: Praeger Security International, 2009), 29.

<sup>5</sup> Kevin Hill and John Hughes, *Cyberpolitics: Citizen Activism In the Age of the Internet* (Lanham, MD: Rowman and Littlefield, 1998), 18-19; Lee Rainie and Barry Wellman, *Networked: The New Social Operating System* (Cambridge, MA: The MIT Press, 2012), 67.

<sup>6</sup> Rid and Hecker, 14-19; Anthony Pratkanis and Elliot Aronson, *Age of Propaganda: The Everyday Use and Abuse of Persuasion* (New York: Henry Holt and Company, 2001), 80; Josh Hands, *@ is for Activism: Dissent, Resistance and Rebellion in a Digital Culture* (New York: Pluto Press, 2011), 48.

centralized governments.<sup>7</sup> Contemporary hierarchical governments are having a difficult time controlling the flow of information over the Internet because the Internet is a decentralized phenomenon never meant to be centrally controlled. It is an ongoing information power struggle, and one that will continue to play out in the years to come.

A significant power shift in communication over the Internet occurred in the early 2000s when various social media platforms started to emerge. Some of these were MySpace (2003), then Facebook (2004), followed by Twitter (2006), and many others since then. These tools created a paradigm shift in interpersonal and mass communication which some have termed as Web 2.0 realities, a blending of both interpersonal and mass communication. Thomas Rid and Marc Hecker describe Web 2.0 as:

a second-generation Internet where contributions of private individuals and self-organized communities compete with those of companies and governments: YouTube, a video sharing site; MySpace or Facebook, two social networking sites; Wikipedia, a collaborative encyclopedia; eBay, a person-to-person auction site; and countless so-called forums that allow individuals to publish their comments and distribute text, image, or video files. The new Web connects people directly and enables dialogue.<sup>8</sup>

Prior to 2003 almost all mass information was from a “one-to-many” type of dissemination construct. One can see this from the Gutenberg Press perspective where one mechanical movable type printing press could mass produce information and send it out to a mass audience.<sup>9</sup> The same concept is found in the invention of the radio, a single

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<sup>7</sup> Moises Naim, *The End of Power: From Boardrooms to Battlefields and Churches to States, Why Being in Charge isn't what it used to be* (New York: Basic Books, 2013), 115-118.

<sup>8</sup> Rid and Hecker, 29.

<sup>9</sup> Clay Shirky, *Here Comes Everybody* (New York: Penguin Books, 2008), 67, 86-87.

platform that can send out information to a mass audience. The radio was followed by the television, and finally the Internet composed of single Web page platforms putting out information accessible by numerous audiences. The mass audience for centuries was predominately in a position of receive mode only.<sup>10</sup> This has changed now, where social media platforms have fostered “many-to-many” communication in the form of collaboration, viewer-generated content, citizen-journalists, anonymous networked activists, networked non-state actors, various networked social movements, and many other communication realities never before seen in history.<sup>11</sup> These changes may force the U.S. Army to enter into the greater conversation at large due to many networked non-state actors and networked social movements who use them for political and military means.

For many years the U.S. Army’s primary influencing organization, Psychological Operations (PSYOP), which conducts Military Information Support Operations (MISO) operated primarily through the traditional methods of one-to-one (face-to-face/direct telephone/email message) or one-to-many type of communication with various

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<sup>10</sup> Hands, 59.

<sup>11</sup> Wael Ghonim, *Revolution 2.0: The Power of the People is Greater than the People in Power* (New York: Houghton Mifflin Harcourt Publishing, 2012), 112-113; Jeff Barnard, “Federal Appeals Court Rules Web Journalists have same Constitutional Protections as Traditional Media,” *USA Today*, January 17, 2014, accessed February 28, 2014, <http://www.usatoday.com/story/money/business/2014/01/17/court-bloggers-have-first-amendment-protections/4604317/>; Paolo Gerbaudo, *Tweets and the Streets: Social Media and Contemporary Activism* (New York: Pluto Press, 2012), 107-108; Manuel Castells, *Networks of Outrage and Hope: Social Movements in the Internet Age* (Malden, MA: Polity Press, 2012), 111.

audiences.<sup>12</sup> Some of these one-to-many methods can be seen with leaflet drops where one platform such as cargo carrying aircraft such as a Lockheed C-130 Hercules, would drop hundreds of thousands of leaflets on a mass audience. A single billboard placed on the side of the road can be seen by many audiences. The same is found in the radio and television platforms sending a broadcast influence message to a mass audience. Social media platforms have radically changed this approach to messaging and influence. What used to be predominately a monologue approach to engaging an audience has now transitioned to a new corporality of dialogue with a target audience. These changes have already altered the business marketing landscape which used to be about targeting a mass audience through TV, radio or print to a new paradigm of communicating with niche audiences, and getting the audience to spread the news about a brand through word-of-mouth marketing efforts.<sup>13</sup> The traditional methods of mass marketing are being altered and so too PSYOP community's approach to influencing foreign audiences may need to change as well to meet the challenges of the future.

The traditional methods of influence through various platforms will not go away; they may need to be complemented by the use of social media platforms that are becoming more ubiquitous in their day-to-day use by a worldwide networked mass

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<sup>12</sup> Department of the Army, Field Manual (FM) 3-05.301, *Psychological Operations Process Tactics, Techniques, and Procedures* (Washington, DC: Government Printing Office, 2007), 6-9 – 6-17.

<sup>13</sup> David Scott, *The New Rules of Marketing and PR: How to Use Social Media, Online Video, Mobile Applications, Blogs, News Releases and Viral Marketing to Reach Buyers Directly* (Hoboken, NJ: John Wiley and Son, 2011), 23-24; Dave Kerpen, *Likeable Social Media: How to Delight Your Customers, Create an Irresistible Brand, and Be Generally Amazing on Facebook (and Other Social Networks)* (New York: McGraw-Hill Books, 2011), 8-9.

audience. At the heart of the matter for the PSYOP community is the greater ability to communicate with an audience in a dialogue through social media networks. The intent with this would be to ultimately control and disrupt conversations or steer the conversations in a direction that will aid in achieving both strategic and operational objectives. To do this more effectively through social media platforms the PSYOP community may have to adopt more of a ‘conversational approach’ to their target audience engagements. Part of this conversational approach to influence activities may be the need for greater communication skills in the art of argument and debate, skills in the use of metaphors and analogies, communicating in a hypothetical or in an anonymous fashion, and the enhanced use of an ongoing dialogue type of narrative. There may also be the potential need for more in-depth understanding and uses in the theoretical psychological or cognitive realms.

In psychology there are many theories that can be leveraged to aid in influencing an audience through social media platforms. Two of these are “cognitive dissonance theory” and the “theory of planned behavior.” When both are merged together through social media they can potentially have enhanced influential results. Cognitive dissonance theory is more about an audience’s struggle with two ideas they are confronted with, where a choice has to be made in the form of an action while simultaneously dealing with two emotions that are in conflict.<sup>14</sup> One example may be the audience is angry about an existing repressive regime and they want to have a new one that is less corrupt. However, they are also confronted with fear in that if they try and do something about the existing

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<sup>14</sup> Richard Perloff, *The Dynamics of Persuasion: Communication and Attitudes in the 21st Century* (New York: Routledge, 2014), 322-323.



regime, beyond democratic approaches, they could be met with some form of physical abuse.

Similar to cognitive dissonance theory is the theory of planned behavior. The theory of planned behavior is similar to cognitive dissonance theory in that an individual or an audience is confronted with an activity and a choice has to be made whether to act on it or not. The particular activity may involve efforts to change the leadership of an organization. Associated with this activity is the individual's attitude towards being able to change the leadership. Is the attitude positive or negative? Associated with this attitude are the subjective norms, such as a significant other who can influence the attitude one way or another. Lastly, how does a target audience (TA) perceive his or her ability to overcome certain obstacles that may hinder the future behavior.<sup>15</sup> These are only two examples of psychological theories that can potentially play a significant role in future social media efforts to engage a networked audience through dialogue.

A key aspect to the Internet and social media sites are the diverse social networks associated with them. There are numerous elements involved with social networks which fall within the realm of social network theories. Some of these theories revolve around the ideas of "dense networks" which are predominately composed of likeminded individuals or homophily.<sup>16</sup> Within a social network there is the emotional need for safety, the need for support, however, there is also the counter reality inherent in the

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<sup>15</sup> Icek Ajzen, "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes* 50, no. 2 (1991): 188-189, accessed February 28, 2014, <http://xa.yimg.com/kq/groups/78997509/701520272/name/Oct+19+Cited+%231+Manag e+THE+THEORY+OF+PLANNED+BEHAVIOR.pdf>.

<sup>16</sup> Charles Kadushin, *Understanding Social networks; Theories, Concepts, and Findings* (New York: Oxford University Press, 2012), 29.

emotions of effectiveness where a TA may want more for themselves.<sup>17</sup> These emotions are typical within any social network and can be exploited. For example, when a member of a “dense network” decides to pursue effectiveness they create what is known within social network theory as “structural holes” within the network. This move to pursue effectiveness weakens the overall “dense network” and can be exploited through social media platforms due to psychological emotional realities, and before mentioned cognitive related theories. These elements and others within social network theory have the potential to be important for the future of the PSYOP community to effectively operate in a greater and greater networked world. Additional implications to MISO efforts in using Web 2.0 tools may be found in the various psychological theories in how using technology influences behavior and potentially how groups organize through the Internet.

Intrinsic within technological social networks are the theories of “technological determinism,” “social construction of technology,” and a mix of both—“social shaping.” For example, technological determinism theory may be important for the PSYOP community to understand because it revolves around dystopian and utopian emotions, such as fears of machines changing us for the worse such as fears over isolation, or for the good where technology provides greater social connectedness.<sup>18</sup> The other reality of technological determinism is found in the belief that these technological tools may change the way we potentially organize, such as by using a flat, horizontal, decentralized Internet and associated new media tools may lead to flat, horizontal, and decentralized

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<sup>17</sup> Ibid., 59-60.

<sup>18</sup> Baym, 24-25.

organizations.<sup>19</sup> This idea is further described as “impact-imprint” where technological characteristics are transferred to their users.<sup>20</sup> Some of these theories can be seen in various networked non-state actors and networked social movements.

Understanding how networked non-state actors and networked social movements organize is critically important in determining how to disrupt them, or guide them in the future. What is unique about these nascent and growing world phenomena is that they have similar decentralized characteristics inherent in Web 2.0 characteristics. For the networked international non-state actor such as Al Qaeda they are a decentralized movement that has taken on characteristics of “(self-) radicalization,” “(self-) recruited,” “self-renewal,” and “self-perpetuation,” all under the guise of being leaderless or even anonymous.<sup>21</sup> Similar to the non-state actors are the various complex social movements who claim that they are also leaderless, decentralized, horizontal, ‘self-produced, self-developed, and self-managed,’ and that they spontaneously appear or mobilize on any given urban symbol to put pressure on governments.<sup>22</sup> Much of this communication and other activities originate in cyber space and with enough momentum converge unto physical space or urban space. Understanding the psychology behind their organizational structures and the dynamic interplay of emotions in cyberspace, followed by the

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<sup>19</sup> Ibid., 26.

<sup>20</sup> Ibid.

<sup>21</sup> Rid and Hecker, 190 and 199.

<sup>22</sup> Castells, *Networks of Outrage and Hope*, 178-180; Gerbaudo, *Tweets and the Streets*, 21-24.

occupation of urban space, has the potential to be critical for future PSYOP in terms of proper target audience analysis and engagement.

### Primary Research Question

Given the conversational nature of Web 2.0 platforms, should Military Information Support Operations (MISO) evolve from its traditional monologue approach of target audience engagement?

### Secondary Research Questions

1. How has the current operational environment changed through Web 2.0 inventions/initiatives?
2. How has Web 2.0 affected the way social networks form and communicate?
3. How do Web 2.0 platforms provide greater venues and enhanced capabilities for shaping and influencing TAs versus traditional face-to-face opportunities?
4. What are the implications for PSYOP operatives?

### Conclusion

This study delves into niche theories that are found among the fields of communications, psychology, sociology, and marketing in order to find the relevant connections between them for enhanced influence. Due to the connected nature of these disciplines through contemporary technology, many of these theories now overlap, and are more integrated. Compartmentalizing knowledge into only one discipline will miss the mark in conducting effective influence operations in the future networked environment. It is the hope of this research project to take a holistic look at the uses of Web 2.0 for influence and gain a greater understanding for the implications it could have

for future of MISO. The literature review will focus on the following areas: the current operational environment and the importance of history to try and figure out what the future may look like as it applies to MISO. This will include an overview of the historical developments in various Information Communication Technologies (ICTs), new media digitized tools and Web 2.0 platforms to communicate, and how have they impacted society. Part of this discussion will include existing uses of Web 2.0 platforms in marketing or by non-state actors, as well as networked social movements to impact centralized state governments. Also, various communication theories in the area of psychology will highlight potential changes in behavior from their extended use. Additionally, the review will look at contemporary research in social network theories, specifically those theories which pertain to influence. Lastly, many of these theories will be tied to niche areas of psychology and will be explained for better integration into planning for operations through Web 2.0 platforms. An explanation of the methodology used in the research will be described in chapter 3. Chapter 4 will discuss the findings from the qualitative research. The final chapter will contain the conclusion and recommendations of the researcher.

## CHAPTER 2

### LITERATURE REVIEW

This literature review will discuss the strengths and weaknesses of conducting U.S. military operations within the context of the technological realities that are inherent with Web 2.0 platforms. Many of the issues within the context of networked social movements and networked non-state actors are contained within Web 2.0 tools which are used for conversations to either mobilize or to conduct various other operations such as recruiting. To set up the argument through existing literature I propose that the driving force for military change, such as the change for greater involvement with Web 2.0 platforms for communication, will come from the environment for which the U.S. military operates. These revolutionary changes are having a dynamic and powerful effect on numerous world political entities and their respective societies. Many of these revolutionary changes are due to the decentralized nature of the Internet.

Part of the literature review will look at the nascent realities of the Internet beginning with Kevin Hill and John Hughes' book, *Cyberpolitics: Citizen Activism in the Age of the Internet*. They have captured the foundation for when the Internet was first conceptualized and with one focus being on the Internets' original decentralized nature where the concepts for "packet switching" and "wide area networking" were developed.<sup>23</sup> Additionally they focus on its evolution from academic to military and eventually to private enterprise. Another book that is associated with the Internet is Peter Diamandis and Steven Kotler's book, *Abundance: The Future is Better than you Think*. They

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<sup>23</sup> Hill and Hughes, 18.

highlight the original computer entrepreneurial culture and how many went on to create numerous computer companies such as Apple. One aspect to this culture was a do-it-yourself type of approach to computing and Web design. Complementing in more detail about the evolution of the Internet and web design is Thomas Rid and Marc Hecker's book, *War 2.0: Irregular Warfare in the Information Age*. Rid and Hecker put into context the growth of telecommunications and the decline of state control over those means of communications. They also capture the evolutionary shift from Web 1.0 which was a period where the Internet was primarily used as a platform to present information to a mass audience, to a new Web 2.0 approach where digitized tools and social media platforms were created to allow for more mass audience content creation and collaboration amongst themselves. Other books that are important to understanding the changes to the Internet are those which highlight the revolutionary changes to traditional marketing to reach potential target audiences. Two books that highlight the changes are; David Scott's, *The New Rules of Marketing and PR*, and Dave Kerpen's, *Likeable Social Media*. Both of these books show how the old approach to mass marketing, such as broadcasting a mass audience commercial to advertise a particular brand has changed, and that the new approach is to leverage the audience through dialogue. Additionally they point out the power of word-of-mouth and how to leverage that through nano-targeting and niche-narratives. Lastly they focus on the power of listening. Corporations cannot sit back anymore with the new Web 2.0 realities and they have to listen in order to properly respond to the audience who now own a greater voice for influence than they have ever had. The last books that point out the importance of the Internet and Web 2.0 capabilities are Claude S. Fischer's book, *America Calling: A Social History of the Telephone to*

1940 and Nancy Baym's book, *Personal Connections in the Digital Age*. These two books focus on the importance of understanding the psychological effects from using technological tools. Some of these have to do with two primary theories such as "technological determinism" and "social constructivism." Technological determinism theory is important because it addresses the psychological possibilities of technological tools transferring their inherent characteristics to their users. Social constructivism theory is just the opposite, it focuses on the realities that technologies do not change us through their uses but the users are in control of the changes. Understanding all of these revolutionary changes to the Internet especially with Web 2.0 platforms will help understand why there has been a rise in social movements and non-state actors effective use of those technological capabilities.

In understanding the nature of modern day social movements such as how they are networked and how they leverage Web 2.0 platforms for communication and organization, there are a few key foundational books. In particular is Clay Shirky's book, *Here Comes Everybody*. Shirky was one of the original sociologists to point out the revolutionary changes that were occurring for political activism through the uses of Web 2.0 platforms. He also shows how the barriers to conduct demonstrations through Web 2.0 platforms have come down and have made it much more efficient for groups to protest against dictatorships. Shirky was also one of the first to show the rise of citizen-journalists and the potential decline of the professional journalist.<sup>24</sup> Other books that point out the recent rise of worldwide social movements are Manuel Castells' book, *Networks of Outrage and Hope*, and Paolo Gerbaudo's book, *Tweets and the Streets*.

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<sup>24</sup> Shirky, 71.



Castells is one of the well known authoritative experts on sociology with regards to social movement theories and concepts. Like Shirky he has pointed out the organizational construct for some of these movements such as being “leaderless.” Other concepts that he has explained are the complexities of communication and organization within cyberspace. Additionally Castells has described the realities of trying to move from one space, such as cyber, to the physical space - public. In terms of the book *Tweets and the Streets*, Gerbaudo argues against both Shirky and Castells with respect to how these modern day social movements are organized, such as the movements not being so leaderless. Gerbaudo explains that these social movements are being led by either ‘soft leaders’ or through a ‘choreographer.’<sup>25</sup> In both books *Networks of Outrage and Hope* and *Tweets and the Streets*, both Castells and Gerbaudo focus on the social movements that occurred with the Arab Spring. However, an eye-witness account for Egypt as to how the movement was organized and executed comes from Wael Ghonim’s book, *Revolution 2.0*. This book compliments Castells and Gerbaudo’s perspectives but it is in much greater detail as to how the dialogue through Web 2.0 platforms actually occurred. Ghonim explains how he set up his Facebook page to start the initial conversation with an Egyptian youth movement. He also describes the use of not only text conversations but also the clever use of photos, audio and video. Within the context of Ghonim’s book and his techniques to communicate, other books such as Richard Perloff’s *The Dynamics of Persuasion*, Anthony Pratkanis and Elliot Aronson’s book, *Age of Propaganda*, and Kelton Rhoads’ article, “Propaganda Tactics and *Fahrenheit 9/11*,” will be used to show the sophistication and the implications for using Web 2.0 platforms for influence. Some

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<sup>25</sup> Gerbaudo, 40 and 44.

of these techniques are in the use of framing and the use of niche-narratives for greater psychological effectiveness. Additionally, the use of cognitive dissonance theory is important as well to facilitate the ability to overcome fear in order to move from cyber space to public space.

The last literature review consists of understanding certain aspects of social network theory within the context of non-state actors. One book in particular is Charles Kadushin's book, *Understanding Social Networks*. A few key points within his book are the theories that highlight "dense networks," "weak ties," and "structural holes." Tied to certain examples from Thomas Rid and Marc Hecker's book, *War 2.0*, such as Al Qaeda's use of Web 2.0 recruiting forums, these theories proposed by Kadushin will show how effective dialogue for influence can be in a networked Web 2.0 environment. Additionally, the psychological theory found in Icek Ajzen's journal article, "The Theory of Planned Behavior," will be used within the context of both Kadushin's theories and Rid and Hecker's Al Qaeda case stories in *War 2.0*.

## CHAPTER 3

### RESEARCH METHODOLOGY

The methodology that I plan on using will be primarily qualitative with the use of abductive reasoning to answer my primary question. The use of abductive reasoning uses inference in order to explain what the best reason is for why the current environment looks the way it does and to understand what the future environment might look like. Additionally I choose this method in order to look at the already existing reliable data and to try and make certain connections. Some of the research will look at other various existing data that has pointed out significant revolutionary changes to the current environment such as with the Internet and the movement from Web 1.0 to Web 2.0.

My research will also take a look at the existing data on recent social movements around the world. There are numerous sociologists who have proposed various theories for how these social movements communicate and how they organize. A compare and contrast for what these professional sociologists have written about is critically important for the future of MISO. Tied to understanding these social movements my research will apply some of the current social media marketing expert's techniques that are being applied to these movements. Other research will focus on how non-state actors are leveraging social media platforms to influence not only recruitment and the will to fight but also public opinion. This leads to trying to answer my question of entering into a greater global and networked conversation, something that U.S. Army PSYOP has not traditionally been used to within a many-to-many Web 2.0 context.

Lastly, in order to understand how to effectively influence in a potential future environment of engagement and dialogue, research into psychological theories will be

addressed. It is possible that some of these theories can be better understood for effectively operating through social media platforms. These various theories will be looked at within the context of both networked social movements and networked non-state actors in order to find their differences and similarities amongst each other in order to maximize their use.

To better understand the shift from traditional methods for influence to the emerging new methods for influence the below graphic will be used to explain. The graphic captures the ideas in the shift from one-to-many means of communication that was more centralized to the new form of many-to-many means of communication which is more decentralized and more of a creative dialogue.

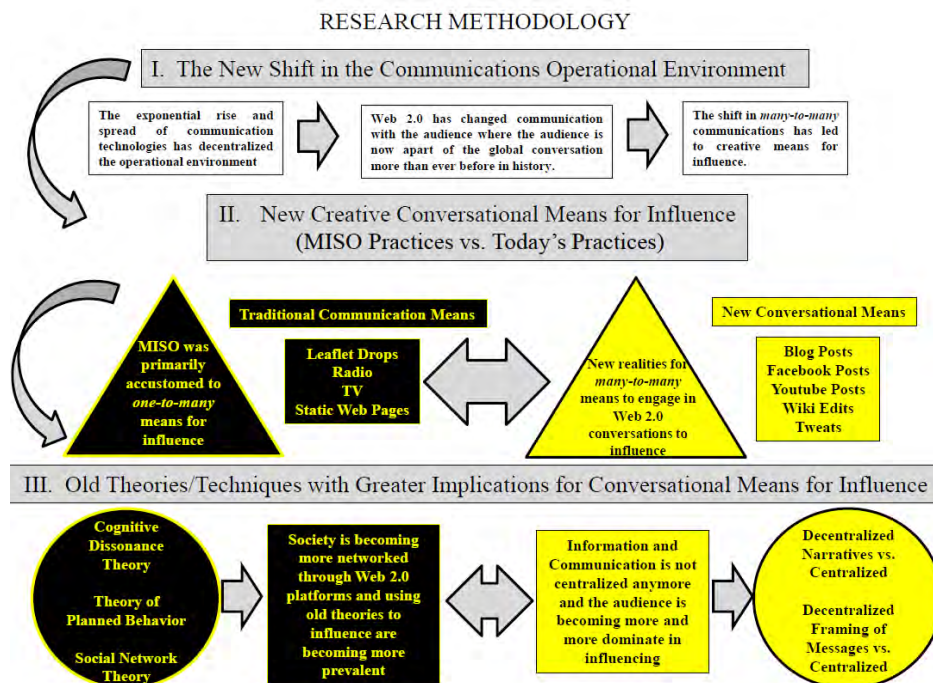


Figure 1. Research Methodology Flow Chart

Source: Created by author.

## CHAPTER 4

### ANALYSIS

This decentralized nature of a WAN based on packet switching appealed greatly to the U.S. Defense Department and the defense industry, since a strategically important network based on packet-switching technology could largely survive even if several computing sites were blasted out of existence by a nuclear device.

— Kevin Hill and John Hughes,  
*Cyber Politics: Citizen Activism in the Age of the Internet*

#### The Internet and the shift from Web 1.0 to Web 2.0

In order to clearly understand the importance of the revolutionary shift from Web 1.0 to Web 2.0 and how it could affect the conduct of MISO, one has to understand the traditional methods for influence that the PSYOP community used. Part of this is in understanding how the PSYOP community approaches target audience analysis and how it develops its messages for delivery. For decades the PSYOP community has been primarily focused on those traditional platforms for message delivery. With the advent of the Internet the PSYOP community incorporated it as a means for delivering a message to a mass audience. However, after the dotcom bubble burst in early 2000 a new shift in messaging and communication has occurred, one that is more dialogue in nature. Some of this new shift has affected traditional marketing techniques and has made technological theories more prevalent when it comes to using Web 2.0 for organizing and communicating.

As part of the Department of Defense, “U.S. Army Military Information Support Operations (MISO) forces are trained, educated, equipped, organized, mission-tailored, and purpose-designed to influence foreign individuals and groups, and inform both

domestic and foreign populations.”<sup>26</sup> Inherent within the context of “influence” is a deliberate approach to understanding foreign target audiences (TAs) cognitive realities composed of “emotions, motives, objective reasoning, and behavior,” in order to effectively influence those behaviors.<sup>27</sup> One significant aspect to MISO is the development of the message. FM 3-53, *Military Information Support Operations*, describes the message as such, “a product or media that is developed, delivered, and adjusted specifically for a given situation and purpose; requiring specialized cultural knowledge, linguistic skills, and a mastery of cross-cultural communications, and a working knowledge of the techniques and technologies required to disseminate effective messages overseas.”<sup>28</sup> A primary focus for conducting MISO has been on the delivery or dissemination of the “product or media.” For decades the dissemination platforms which the PSYOP community has traditionally used have been just that, platforms that deliver a message.

When PSYOP organizations develop their products they are developed in such a way where multiple products are designed to be delivered to one TA. For example, during phase III of the MISO planning process multiple products across various mediums

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<sup>26</sup> Department of the Army, Field Manual (FM) 3-53, *Military Information Support Operations* (Washington, DC: Office of the Chief of Staff of the Army, January 2013), 1-1.

<sup>27</sup> Department of the Army, Field Manual (FM) 3-05.301, *Psychological Operations Process Tactics, Techniques, and Procedures* (Washington, DC: Government Printing Office, 2007), viii.

<sup>28</sup> Department of the Army, Field Manual (FM) 3-53, *Military Information Support Operations*, 1-4 – 1-5.

are develop in what is called a series.<sup>29</sup> FM 3-53 describes this as a “complex, creative, and collaborative process that creates synergy between multiple products and actions to achieve the desired behavior change for a single TA.<sup>30</sup> Within the series, products can consist of billboards, comic books, email messages, loudspeaker, posters, radio, television, wireless messages, and video games.<sup>31</sup> Historically the series is the most effective means to achieve behavioral change. Research has shown “that a TA is best influenced by a consistent and coordinated series of multiple products and actions that incorporate an appropriate mix of media.”<sup>32</sup> Based off of this traditional model, the series has been implemented and executed through those platforms that can deliver each message, through each form of media, to a specified TA. This traditional method has typically been a monologue type of approach where the audience is in a receive mode at the other end of delivery. There was not a focus on engaging in any type of dialogue in order to change behavior through many of the traditional platforms.

The monologue type of approach can be seen in the recent wars in Iraq and Afghanistan. Many platforms have been used to deliver the message whether it is from a C-130 to drop hundreds of thousands of leaflets, a ‘radio-in-a-box’ from a Combat Outpost (COP) in a district within Afghanistan, or a TV broadcast from either a station in downtown Kabul or Baghdad. All of these traditional platforms were used primarily to

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<sup>29</sup> Department of the Army, Field Manual (FM) 3-05.301, *Psychological Operations Process Tactics, Techniques, and Procedures*, 3-1.

<sup>30</sup> Ibid.

<sup>31</sup> Ibid., 3-5.

<sup>32</sup> Ibid., 3-1.

deliver a message to a specific TA and then followed up at a later date through surveys or other various metrics to determine how effective they were in changing behavior. There was not any serious thought that went into the dynamics of engaging in a dialogue with the TA through these traditional platforms for delivery. Another way to view these traditional broadcast dissemination platforms is to conceptualize them within the context of being one platform used to deliver a message to many individuals within a specific TA.

In FM 3-05.301, *Psychological Operations Process, Tactics, Techniques, and Procedures*, there are three major categories listed for dissemination means in the form of one platform broadcasting to many within a given TA, they are; broadcast dissemination such radio and television, aerial dissemination such as high altitude static-line leaflet drops, and digital dissemination such as “Websites to disseminate information.”<sup>33</sup> All three of these broadcast dissemination platforms were used extensively in Afghanistan, Iraq and other countries during the Global War on Terror. Each consisted of a message that was produced either in the form of a radio script or a thirty second TV commercial, a graphically designed leaflet, and a software designed Webpage. One message delivered to many within a given TA who would then view the message. All of these fall into the category of one-to-many type of communications. They are all designed for one-way type of communication where the audience wasn’t a part of any type of conversation or dialogue, it was all monologue. The only major type of communication process that falls

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<sup>33</sup> Department of the Army, Field Manual 3-05.301, *Psychological Operations Process Tactics, Techniques, and Procedures*, 6-12 – 6-17.



in line with a dialogue is face-to-face communication. With face-to-face communication FM 3-05.301 states;

Face-to-face communication is the conveyance of a message by the sender in the sight or presence of the receiver. Face-to-face communication ranges from two or more individuals in informal conversation to planned persuasion among groups. The credibility of the PSYOP messages delivered by face-to-face communication is increased when the communicator is known and respected. By disseminating through face-to-face communication, PSYOP forces have the opportunity to interact with the local populace and get direct and immediate feedback and reactions from the TA.<sup>34</sup>

Inherent with face-to-face communication is the interpersonal relationship that is fostered. This interpersonal aspect is developed further through the ongoing dialogue that takes place through conversation. However, most of these conversations take place in physical settings where one PSYOP Officer or Soldier engages in a dialogue with an indigenous audience. It doesn't reach the level of many-to-many that is fostered through Web 2.0 platforms for collaboration. Through Web 2.0 the dialogue takes on a greater exponential effect due to the networked realities of social media platforms and has much greater effects beyond the traditional face-to-face methods.

One way of looking at the difference or power in using Web 2.0 platforms for dialogue versus the traditional dissemination platforms or even face-to-face communication, is in building a greater member loyalty to a cause. One reason that face-to-face is such an effective method for influence versus the traditional dissemination platforms is due to the bonds that are created through the interpersonal conversations. However, these bonds can be achieved and enhanced without ever physically meeting the TA. Oliver Blanchard in his book *Social Media ROI: Managing and Measuring Social*

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<sup>34</sup> Ibid., 6-10.

*Media Efforts in your Organization* states the differences between the old traditional means to disseminate information to the new dialogue through Web 2.0 platforms;

Traditional forms of media, such as television, radio, and print, provide an excellent means of reaching vast amounts of people quickly, but their downside is that these touches are both brief and scarce. This works if the objective is to create awareness but it falls short of creating loyalty for an organization or a cause. Loyalty, unlike awareness, takes time to develop. It finds its roots in the trust, familiarity and respect that stem from frequent interactions with an organization, and the repetitive validation of a value alignment without which these interactions are meaningless. Through the use of social media, organizations can breed loyalty in their members by interacting regularly with them, befriending them, and empowering them to make a difference. The magic stems from the fact social media can help humanize communications to such a degree that genuine friendships can begin to form between an organization's staff and the members they interact with online, even if they have never met in the real world.<sup>35</sup>

With the traditional methods of one-to-many dissemination, loyalty to a cause was lacking. Through traditional face-to-face interpersonal dialogue created greater loyalty to a mission's cause. However, Web 2.0 platforms can potentially have much greater effects in building trust and loyalty through dialogue than the traditional methods for influence. The major reason for this is not only through mediated conversation but also through the networks that are built around Web 2.0 platforms and the exponential reach inherent within them. The dialogue reaches exponential effects through many-to-many conversations when all of the other followers spread the conversation through their respective networks. This type of influence is not as effective through the traditional platforms of one-to-many type of approaches.

As has been described PSYOP organizations have historically used those traditional platforms to reach a TA to influence. Most of these efforts came from the

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<sup>35</sup> Oliver Blanchard, *Social Media ROI: Managing and Measuring Social Media Efforts in your Organization* (Indianapolis, IN: Que, 2011), 26.

design of a specific message within a certain product for dissemination. Most of these dissemination means fostered a one-to-many type of situation where one platform delivered a message to many within a specific TA. Dialogue was not an aspect for consideration. Greater effectiveness for influence was enhanced through face-to-face communication, however, it was difficult to reach a large audience through traditional face to face interpersonal approaches. A PSYOP team is limited to that physical space in time and a limited audience for interpersonal communication. What has changed within recent years has been the rise of Web 2.0 platforms which have facilitated a new form of mediated communication for influence.

Essentially face to face interpersonal communication has been amplified through these various Web 2.0 platforms. To a certain degree face to face is now mediated face to face through Web 2.0 platforms. However, the massive difference is in the exponential reach and mass communication aspects that are also associated with this new form of mediated communication. The interpersonal communication found with face to face has become mass communication through Web 2.0 due to the interconnectedness found in social networks. Additionally, other followers through Web 2.0 are getting the same message and participating in the dialogue which has exponential viral effects in spreading the message. When you add into these Web 2.0 platforms other various new media forms for communication, such as; digitized text, digitized images, and digitized audio and video, the realities for greater influence are exponentially increased. It is through all of these tools that have caused networked social movements and networked non-state actors to become that much more powerful in competing against traditional state governments. A better understanding of how these Web 2.0 platforms came to be is helpful to

understanding why they are so effective in this new era for networked mediated influence.

The modern day version of the Internet and its integrated computer network system was based off of the ideas from both Leonard Kleinrock and JCR Liklander.<sup>36</sup> In 1961 Kleinrock designed the technological concept of “packet switching” and the following year Liklander published a paper on the concept of linking together geographically dispersed computers known as “wide area networking.”<sup>37</sup> The basic idea behind packet switching involves “slicing the data that flows between two computers over a network into chunks, so that any one part of the data that was garbled or lost could be easily resent, without having to resend the whole piece of data.”<sup>38</sup> One way of looking at this concept is to view a wide area network (WAN) with fifty-sets of computers linked in. If five of the networks were to crash, the other forty-five networks will not if they are using packet switching, since they are able to send these chunks of data to each other without having the whole WAN functioning.<sup>39</sup> This concept by its nature is decentralized and at the time the U.S. Defense Department and the defense industry were highly interested in the idea of packet-switching technology because the WAN could survive a nuclear attack even if several computing sites were destroyed.<sup>40</sup> Eventually this would evolve into the 1969 founding of the Advanced Research Projects Agency Network

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<sup>36</sup> Hill and Hughes, 18.

<sup>37</sup> Ibid.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid., 18-19.

<sup>40</sup> Ibid., 19.

(ARPANET); a vast collection of interconnected computer networks that was designed for both the military and technical academic use, and was a precursor to today's version of the Internet.<sup>41</sup> Twenty-six years later, in 1995, the Internet infrastructure would be handed over to private network providers and would spark the global Internet Information Revolution.<sup>42</sup> One key aspect to the Internet is that computers are linked into a decentralized networked infrastructure.

One year before ARPANET was created a catalogue titled Whole Earth Catalogue (WEC) was published by Stewart Brand.<sup>43</sup> The catalogue was a blend of liberal social values, various ideas about what was appropriate technology, ecological notions of whole systems thinking and the vision of a do-it-yourself (DIY) work ethic - a concept found in the 1841 essay "Self-Reliance" by Ralph Waldo Emerson.<sup>44</sup> Based off of the influence of Emerson's idea of "Self-Reliance," Brand came up with the original concept and phrase "personal computer."<sup>45</sup> At the time the computer was very expensive and was used by those who could afford them. Kevin Kelly of Wired Magazine who was once an editor for WEC explains the mindset of the 60s towards computing;

In the sixties, computers were Big Brother. The Man. They were used by the enemy, massive grey-flannel-suit corporations and the government. But Brand

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<sup>41</sup> Ibid.

<sup>42</sup> Ibid., 21.

<sup>43</sup> Peter Diamandis and Steven Kotler, *Abundance: The Future is Better than you Think* (New York: Free Press, 2012), 119.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid., 120.

saw what was possible with computers. He understood that if these tools became personal, it flipped the world around into a place where people were gods.<sup>46</sup>

WEC was an inspirational tech hobbyist publication and would lead the left leaning activist Fred Moore to create the Homebrew Computer Club in the 1970s.<sup>47</sup>

The Homebrew Computer Club carried the theme of not only merging the WEC ideas of self-reliance and technology but also spreading these ideas through a technological network. The original idea of Moore's network was to share tech trade secrets such as swapping circuits or encouraging a "hacker ethic."<sup>48</sup> Some of the original tech hobbyist's members of the Homebrew Computer Club were some of the most well known inventors in America such as Steve Jobs and Steve Wozniak, both of which were the co-founders of Apple Inc.<sup>49</sup> Apple would become one of twenty-three tech companies that the club would produce and revolutionize the tech industry.<sup>50</sup> Some these of these original tech companies would inspire others to create revolutionizing products from the personal desk-top computer to today's smart phones and other tech platforms such as the revolutionizing idea, social media.

Leading up to the dotcom crash in 2000 the Internet was crowded by numerous Web services consisting of small Internet service providers, large centrally hosted corporate providers, countless personal home pages and cumbersome do-it-yourself Web

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<sup>46</sup> Ibid., 120-121.

<sup>47</sup> Ibid., 121.

<sup>48</sup> Ibid., 122.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid.

design.<sup>51</sup> The Web browsers were all designed in such a way for an audience to access information rather than facilitate online two-way conversations. Two examples of this lack of collaboration design was Amazon.com who in 1994 did not have a collaboration feature to its website and Weblogs which were devoid of comment sections.<sup>52</sup> The websites during the 1990s were dominated by web features which were platforms for providing information to the various audiences and were not for engaging in a conversation. They were a one-to-many type of platform such as radio and television were one-to-many types of platforms. These early Internet web design approaches have been termed Web 1.0. This all started to change with the few companies who survived the dotcom crash and when the “demand for participation and interactivity in mass communication began to soar,” the emergence of Web 2.0 began.<sup>53</sup>

One approach to understanding all of the various revolutionary realities that are inherent with social media is within the context of Web 2.0. Thomas Rid and Marc Hecker in their book, *War 2.0: Irregular Warfare in the Information Age*, have captured the powerful implications of what Web 2.0 is all about. They describe the shift from Web 1.0 to Web 2.0 and the digitization of many forms of media as such;

A number of simultaneous changes associated with the digitization of various products and services are usually lumped together under the term new media: widespread personal computers, online music distribution, MP3 players, DVDs, digital TV, mobile phones, PDAs, blogs, video-sharing, photo-sharing, social networking, online publications of all sorts, and all innovative Web-based

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<sup>51</sup> Trebor Scholz, “Infrastructure: Its Transformations and Effect on Digital Activism,” in *Digital Activism Decoded: The New Mechanics of Change*, ed. Mary Joyce (New York: International Debate Press, 2010), 21.

<sup>52</sup> Ibid.

<sup>53</sup> Rid and Hecker, 29.

communications projects and businesses. Yet the talk of the new media as a catchphrase might distract from its genuinely new characteristics.<sup>54</sup>

And with the web sites that contained the software or tools for “user-generated content” they describe as;

Such peep-to-peer technologies empower activist individuals, a trend known as Web 2.0. The term, coined by the entrepreneur Tim O’Reilly, describes a second-generation Internet where contributions of private individuals and self-organized communities compete with those of companies and governments: YouTube, a video sharing site; MySpace or Facebook, two social-networking sites; Wikipedia, a collaborative encyclopedia; eBay, a person-to-person auction site; and countless so-called forums that allow individuals to publish their comments and distribute text, image, or video files. The new Web connects people directly and enables dialogue. The contrast to the old media could hardly be sharper, where news companies (and in some countries the state) were masters over public monologue. New media, as Wikipedia put it rather elegantly, is “the marriage of mediated communication technologies with digital computers.”<sup>55</sup>

One way of looking at these revolutionary changes to the digitization of technological tools or new media can be seen as the dematerialization and demonetization of traditional goods and services.

Peter Diamandis and Steven Kotler, in their book, *Abundance: The Future is Better than you Think*, explain some of the implications of these changes to new media and Web 2.0 such as with the smart phone. The smart phone has dematerialized and demonetized certain traditional goods and services such as;

cameras, radios, TVs, web browsers, recording studios, editing suits, movie theaters, GPS navigators, word processors, spreadsheets, stereos, flashlights, board games, card games, video games, whole range of medical devices, maps, atlases, encyclopedias, dictionaries, translators, textbooks, world class educations.<sup>56</sup>

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<sup>54</sup> Ibid., 29.

<sup>55</sup> Ibid.

<sup>56</sup> Diamandis and Kotler, 150-151.



This is another example of the revolutionary decentralization and dematerialization of traditional goods and services which had required significant natural resources to produce, large distribution networks to deliver, and highly trained professionals to guarantee that all operations ran smoothly.<sup>57</sup> Other realities with the Internet and how it has changed the landscape of communication from Web 1.0 to Web 2.0 and the dematerialization of various communication tools are the shifts from one-to-one communication and one-to-many communication. The New York University professor Clay Shirky was one of the first to see the shifts that were occurring with Web 2.0 communication platforms. These two forms of communication, one-to-one and one-to-many would not change until the emergence of Web 2.0, and would give birth to many-to-many type of platforms where both mass and interpersonal communications co-exist. Shirky describes the revolutionary shifts from both modes of communication and their implications;

The telephone, the technological revolution that put the most expressive power in the hands of the individual, didn't create an audience; telephones were designed for conversation. Meanwhile the printing press and recorded and broadcast media created huge audiences but left control of the media in the hands of a small group of professionals. As mobile phones and the Internet both spread and merge, we now have a platform that creates both expressive power and audience size. Every new user is a potential creator and consumer, and an audience whose members can cooperate directly with one another, many to many, is a former audience.<sup>58</sup>

This concept of many-to-many has created a new paradigm shift in communication where everyone in the world practically has the capability to talk with everyone else simultaneously. This has caused many revolutionizing effects to major professional

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<sup>57</sup> Ibid., 151.

<sup>58</sup> Ibid., 106-107.

industries such as with professional journalism where they have to compete with the new realities of “autonomous media.”<sup>59</sup>

One concept of autonomous media found with Web 2.0 is the rise of the citizen journalist. Some examples of these are websites which are meant to be either alternatives to mass media or just personal blogging sites of information that is important to any given individual. However, some of these sites such as Indymedia or the South Korean OhMyNews websites are designed to allow anyone to “challenge the claims by the mainstream media, make their own voice heard, and become a citizen journalist.”<sup>60</sup> What these citizen sites do to main stream media is “challenge their ability to shape public opinion.”<sup>61</sup> These ‘content creators’ can challenge the mainstream media through all forms of digitized tools such as text, images, audio, or video. Web 2.0 and social media realities have also had a significant impact on traditional marketing as well.

Traditional marketing techniques were in line with the two modes of primary communication whether those were one-to-one or one-to-many. With the rise of Web 2.0 platforms this traditional communicating paradigm has been altered. In the past all forms of advertising were primarily focused “on getting prospects to stop what they are doing and pay attention to a message.”<sup>62</sup> However these marketing approaches were product or brand focused. David Scott in his book, *The New Rules of Marketing and PR* has

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<sup>59</sup> Scholz, 23.

<sup>60</sup> Ibid.

<sup>61</sup> Ibid.

<sup>62</sup> Scott, *The New Rules of Marketing and PR*, 7.

described the shift from product-focused one-way marketing to the new method where he explains;

Forced to compete with new marketing on the web that is centered on interaction, information, education, and choice, advertisers can no longer break through with dumbed-down broadcasts about their wonderful products. With the average person now seeing hundreds of seller-spun commercial messages per day, people just don't trust advertising. We turn it off in our minds, if we notice it at all.<sup>63</sup>

Additionally Scott points out that in the past organizations had two primary means for gaining attraction; those were either buying expensive advertisements or “get third-party ink from the media.”<sup>64</sup> This “third-party ink” was essentially in the form of press releases from various media outlets that would vet or filter all information coming in from numerous companies and organizations. If the information about any particular company met the media's expectations then they would release it to the public. This has all changed with Web 2.0 realities where numerous organizations and companies do not have to go through traditional media outlets to brag about their organizations, they can release it on their own anytime. Another change that is occurring with Web 2.0 is the shift from quality to content as it applies to YouTube videos or as Scott describes them “business-casual video.”<sup>65</sup>

The concept of business-casual video comes from the CEO of Visible-Gains, Cliff Pollan and he describes the idea where organizations like *60 Minutes* would spend

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<sup>63</sup> Ibid.

<sup>64</sup> Ibid., 5.

<sup>65</sup> Ibid., 252.

thousands of dollars and take months to produce a high quality segment for a particular program.<sup>66</sup> Scott explains the new shift that is occurring online;

Some people say that quality is essential. While I agree that a video should be appealing, I'm convinced that a lack of studio, high-wattage lighting, and makeup artists isn't a big deal. If the subject is interesting, people are plenty tolerant of the conditions under which the video was filmed. Of course, you need to stay within reason. I don't advocate poorly shot video, terrible lighting, or bad editing.<sup>67</sup>

The major point of this is that with all of the democratization of technology organizations, businesses and even individuals can produce low-quality videos that are filled with meaningful content and can do it at exponentially reduced costs and speed. Much of what Scott has pointed out has everything to do with the new shift in organizations having to be more engaging with their audience due to the social interaction that Web 2.0 fosters. One example of the why behind this new phenomenon is found in the enhancement of word-of-mouth conversations on the Web.

This idea of interaction which is facilitated by the new version of word-of-mouth marketing is amplified in Dave Kerpen's book, *Likeable Social Media*, where he describes a technological shift back to the time period prior to 1450, he explains;

Word-of-mouth marketing had begun, and it would remain the best, purest, most efficient form of marketing for thousands of years. Then, in the year 1450, the printing press ushered in a new era of mass marketing and media. Direct mail, followed by newspapers and magazines, and radio and television, allowed marketers and advertisers to target huge groups of people at once.<sup>68</sup>

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<sup>66</sup> Ibid., 252.

<sup>67</sup> Ibid., 253.

<sup>68</sup> Dave Kerpen, *Likeable Social Media: How to Delight Your Customers, Create an Irresistible Brand, and Be Generally Amazing on Facebook* (and other social networks) (New York: McGraw-Hill Books, 2011), 2.

What has made word-of-mouth more powerful is the amplification of Web 2.0 platforms for the mass audience to use and voice their concerns about any company's products. The companies have no choice but to listen to what the audience is saying and then respond. One well known example of the power of word-of-mouth came from the country singer Dave Carroll who was on a United Airlines flight in 2009. His guitar was broken while stored in the luggage bin of the aircraft and when he complained to United about it they would not replace it or even apologize that the incident had happened.<sup>69</sup> Carroll then made a music video titled 'United Breaks Guitars' and posted it on YouTube, within 24 hours the video had more than 100,000 views.<sup>70</sup> United then made a phone call to him to make amends. Instead of countering the claim publically such as through a YouTube video, a Facebook post or a tweet on Twitter, within four days the video had reached one million views and was being amplified by national news coverage.<sup>71</sup> United's stock price fell ten percent during that time and their brand still has not recovered ever since.<sup>72</sup> Additionally, there is an exponential viral spread of this type of negative or even positive type of information.

Once information is posted on YouTube, Facebook or Twitter there are hundreds of thousands of people who can view it and share it. If an individual has a hundred and fifty friends on Facebook or a hundred and fifty followers on Twitter, then those friends and followers who also may have a hundred and fifty friends or followers can spread this

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<sup>69</sup> Ibid., 69.

<sup>70</sup> Ibid.

<sup>71</sup> Ibid.

<sup>72</sup> Ibid.

information as well reaching an exponential viral effect. It is situations like this and many others that have caused organizations and businesses to become more engaging with the audience. Kerpen states, “marketing in a social media and Facebook world is not about broadcasting your message and getting the largest reach and frequency—it is about tapping into the conversation, listening, engaging, and empowering. The loudest, biggest spenders don’t win anymore. The smartest, most flexible listeners do.”<sup>73</sup> The conversation was dominated by the old traditional forms of marketing. This all changed with Web 2.0 where the mass audience and all of the conversations in public life are migrating to the social networks of the Internet and are challenging those old traditional one-way modes of communication. As more and more people migrate to the Internet and use those Web 2.0 platforms for engagement and dialogue, it is important to understand some of the technological theories that have been proposed with regards to their use.

One of the well known sociologists who made a greater attempt to understanding and explaining the impacts of technology on society is University of California Berkley professor Claude S. Fischer. In his 1992 book, *America Calling: A Social History of the Telephone to 1940* he describes two technological theories which affect human behavior; they are “technological determinism” and “social constructivism.” Technological determinism theory is primarily concerned with how new technologies affect the users who use them, such as with the “impact-imprint” example. Fischer explains “impact-imprint,” “According to this school of thought, new technologies alter history, not by their economic logic, but by the cultural and psychological transfer of their essential qualities to their users. A technology ‘imprints’ itself on personal and collective

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<sup>73</sup> Ibid., 9.

psyches.”<sup>74</sup> One example proposed by Fischer was “the speed of the bicycle and automobile, the instantaneity of the telegraph and telephone—transfer to their users.”<sup>75</sup> Nancy Baym in her book, *Personal Connections in the Digital Age* has stated, “the more you use them, the more they use you, and the more you are influenced by them.”<sup>76</sup> One aspect of “‘impact-imprint’ can be found with the characteristics of the Internet. The Internet is decentralized in its nature, whether in the form of flat wires or wireless capabilities, and it is networked which is also a decentralized non-hierarchical concept. Other “‘impact-imprints” can be seen with mobile phones and smart phones which have allowed users to spread out as opposed to being centralized using all forms of communication such as through text, audio or video. What technological determinism theory is essentially trying to say about these tools is that they can reshape us in the mode of their individual characteristics. Additionally, inherent within technological determinism are the dystopian fears associated with the theory such as; people would become “‘addicted’ to the Internet,” and that “communication technologies will take us farther apart from one another.”<sup>77</sup> The other side of the coin is more utopian where; “new communication technologies will *bring families and loved ones together . . .* build communities, and

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<sup>74</sup> Claude S. Fischer, *America Calling: A Social History of the Telephone to 1940* (Berkeley, CA: University of California Press, 1992), 10.

<sup>75</sup> Ibid.

<sup>76</sup> Baym, 26.

<sup>77</sup> Ibid., 38.

decrease loneliness.”<sup>78</sup> For those users who are not controlled by technology but are in control of the devices, they fall in line with the theoretical idea of social constructivism.

Fischer and other critics have pointed out that technological change comes from particular social groups who actually “develop the technologies for particular purposes- such as entrepreneurs for profits and the military for warfare.”<sup>79</sup> Additionally Fischer takes the idea a step further stating that “People are neither ‘impacted’ by external force, nor are they unconscious pawns of a cultural *Geist*. Instead of being manipulated, they manipulate.”<sup>80</sup> In other words it isn’t that new technologies are controlling or manipulating the users who use them but it is the users who control them for their own uses or purposes. Of course those purposes may not have been what the entrepreneurs or military had originally intended them to be used for as the users modify their capabilities to suit their own group or individual needs. Then there are certain situations where both technological determinism and social construction work hand in hand, a mixture of the two theories where the truth “lies somewhere in between.”<sup>81</sup> In this case the theory becomes “social shaping” which deals with technological causes and the causes associated with how people use technology.<sup>82</sup> Using the theory of social shaping it is difficult to fathom that the originators of packet switching and WAN foresaw the second

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<sup>78</sup> Ibid., 35-36.

<sup>79</sup> Fischer, 8.

<sup>80</sup> Ibid., 17.

<sup>81</sup> Baym, 44.

<sup>82</sup> Ibid., 44.



and third order effects of the Internet, and the revolutionary impact that it would have on the world.

As has been discussed the PSYOP community for decades has been primarily focused on those traditional platforms for message delivery. However, after the dotcom bubble burst in early 2000 the rise of Web 2.0 platforms has created a new environment where dialogue has gained greater importance for communication practices such as with various marketing firms. Due to the increased use of technology to organize and communicate a better understanding of the technological theories such as technological determinism and social construction may be important to understand more clearly in order to target and communicate with various audiences. Case in point the various uses of Web 2.0 platforms which have been used by multiple networked social movements and networked non-state actors around the world to disrupt or overthrow governments.

#### Networked Social Movements' use of Web 2.0

Offering a flexible and decentralized communication infrastructure, the Internet seems to have a special affinity with the looser forms of organizing that characterize social movements. Facilitating rapid and cheap communication across geographical boundaries, the Internet can aid in transforming dissatisfaction to mass collective action quickly and efficiently. Online tools can help social movements find and disseminate information, recruit participants, organize, coordinate, and make decisions.<sup>83</sup>

In 2003 a hundred people showed up on the ninth floor of a Macy's department store to look at a particularly large and very expensive rug.<sup>84</sup> When a puzzled sales

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<sup>83</sup> Anastasia Kavada, "Activism Transforms Digital: The Social Movement Perspective." in *Digital Activism Decoded: The New Mechanics of Change*, ed. Mary Joyce (New York: International Debate Press, 2010), 102.

<sup>84</sup> Shirky, 164-165.

assistant asked if they needed any assistance they responded that they lived together in a commune, they were looking for a “love rug,” and they made their decisions as a group.<sup>85</sup> Ten minutes later they suddenly dispersed in an uncoordinated fashion and in multiple directions.<sup>86</sup> What is unique about this seemingly harmless demonstration is that it is considered the “first successful flash mob,” which is “a group that engages in seemingly spontaneous but actually synchronized behavior.”<sup>87</sup> These events are initially formed with some type of instructions explaining when and where the group should appear, and what activity they should conduct once they have assembled.<sup>88</sup> Another aspect to flash mobs is that they lack centralized control, although they are coordinated by some type activist group.<sup>89</sup> They are meant to be harmless in nature yet attention grabbers such as dozens of people perched on a central park ledge making bird noises, a “Zombie walk” in San Francisco or “silent dance parties at London’s Victoria Station.”<sup>90</sup> Some of these non-violent flash mob techniques have also found themselves in flash mobs for political purposes.

Not long after the first flash mob at the Macy’s Department Store, the first political flash mob sponsored by the 2003 Howard Dean Presidential campaign took

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<sup>85</sup> Ibid., 165.

<sup>86</sup> Ibid.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Brannon Cullum, “Devices: The Power of Mobile Phones.” in *Digital Activism Decoded: The New Mechanics of Change*, ed. Mary Joyce (New York: International Debate Press, 2010), 57-58.

<sup>90</sup> Shirky, 165.

place in Seattle Washington.<sup>91</sup> That flash mob was soon followed by another political flash mob two weeks before the Russian presidential elections in Prime Minister Vladimir Putin's hometown of St. Petersburg.<sup>92</sup> The staged demonstration consisted of around sixty youths wearing Putin masks and t-shirts with the message of "Voga go home!"<sup>93</sup> Many of these political flash mob techniques follow the nonviolent action guidelines proposed by Gene Sharp in his book, *From Dictatorship to Democracy: A Conceptual Framework for Liberation*. Some of the techniques that Sharp highlights are the use of slogans, symbols, display of portraits, vigils, skits, pranks, collective disappearance and silence.<sup>94</sup> However, not all of these flash mobs occur without confrontation and since 2003 they have grown more sophisticated through the use of Web 2.0 platforms, and they have become more problematic for existing governments. One such example is the European country of Belarus.

In March of 2006 Alexander Lukashenko won 85 percent of the electoral vote for a third presidential term.<sup>95</sup> However, European election observers stated that the election was rigged, this news caused over ten thousand protestors to mass in Oktyabrskaya Square.<sup>96</sup> In response to the protests the heavy handed Lukashenko government "arrested

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<sup>91</sup> Ibid.

<sup>92</sup> Ibid.

<sup>93</sup> Ibid.

<sup>94</sup> Gene Sharp, *From Dictatorship to Democracy: A Conceptual Framework for Liberation*, 4th ed. (Boston, MA: The Albert Einstein Institution, 2010), 79-81.

<sup>95</sup> Shirky, 166.

<sup>96</sup> Ibid.

hundreds of protestors and jailed the leading opposition leader.”<sup>97</sup> To counter this act someone posting under the name “by\_mob” used the blogging software Livejournal to propose a flash mob.<sup>98</sup> The date that was proposed was May 2006, the location would be Oktyabrskaya Square, and the non-violent activity would be eating ice cream.<sup>99</sup> In response to this action the Belarus police hauled off the peaceful ice cream protestors, “all while being documented in the now-standard pattern as other participants took digital pictures and uploaded them to Flickr, Livejournal, and other online outlets.”<sup>100</sup> These images were then picked up by other political bloggers such as Andy Carvin and Ethan Zuckerman who then amplified the events far beyond the borders of Belarus.<sup>101</sup> These protests although harmless in nature are viewed by the state as both a “threat and a rebuke to the state.”<sup>102</sup> However, they marked a new shift in terms of organizing.

Shirky explains the shift from the traditional methods of protest using the 1989 East German city of Leipzig where protestors were easy targets because early organization of a music event for political protest were fairly visible from the very beginning.<sup>103</sup> The government’s tight control of the media made it very difficult for the

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<sup>97</sup> Ibid.

<sup>98</sup> Ibid.

<sup>99</sup> Ibid., 166-167.

<sup>100</sup> Ibid., 167.

<sup>101</sup> Ibid.

<sup>102</sup> Ibid.

<sup>103</sup> Ibid., 168.

planners to organize any type of demonstration.<sup>104</sup> Shirky describes the powerful shift in protest organization through Web 2.0 platforms;

Now the organization of group effort can be invisible, but the results can be immediately visible. Because the cost of sharing and coordinating has collapsed, new methods of organization are available to ordinary citizens, methods that allow events to be arranged without much advance planning. Because the mobs were proposed via weblog, the state had no way of keeping track of who had seen the plan. They could not break up the plot, since there was no plot; the event was proposed in public, so there was no secret information to uncover. Even if the government had the surveillance apparatus to know the identity of all the blog readers, it had no way of knowing which of them were planning to attend.<sup>105</sup>

These costs of sharing and coordinating having collapsed have been pointed out by Jennifer Earl and Katrina Kimport in their book, *Digitally Enabled Social Change: Activism in the Internet Age*, they write in regards to what pre-Web 1.0 activism looked like in terms of costs;

Across these cases—which traverse time, place, and the specific movement involved—at least two things were fixed: organizing and participating in protest was relatively socially expensive (i.e. it took time, risk, and sometimes also pecuniary costs), and people had to come together in time and place to protest, which is what we refer to as copresence.<sup>106</sup>

And they conceptualize the greater ease and low-cost forms of new activism as “Theory 2.0 Participation” or as “five-minute activism” as described through the various Web 2.0 platforms such as MoveOn.org. They state;

MoveOn represents a new model of mobilization in which small-time investments by participants allow scores more individuals to participate—and to do so quickly. Casting this model as flash activism, they make an analogy to flash floods where

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<sup>104</sup> Ibid.

<sup>105</sup> Ibid.

<sup>106</sup> Katharine Brodock, “Economic and Social Factors: The Digital (Activism) Divide.” in *Digital Activism Decoded: The New Mechanics of Change*, ed. Mary Joyce (New York: International Debate Press, 2010), 72-73.

the power comes from the quick and massive level of water, which then quickly subsides. Here Bennett and Fielding assert that the power of flash activism comes not from the expensiveness of the participation and people's willingness to bear the costs to participate but rather from the massive influx of participation that is possible when the costs of participation are lowered enough that a much larger percentage of ideologically sympathetic individuals are willing to participate.<sup>107</sup>

This is a major shift in history where activism has become so easy to execute due to the use of Web 2.0 platforms which are becoming more and more ubiquitous. The various uses of these platforms for communication and organization are numerous and have been highlighted by both Manuel Castells and Paolo Gerbaudo.

Manuel Castells is one of the well known professors of sociology in academia and is currently the Professor and Wallis Annenberg Chair of Communication Technology and Society at the University of Southern California, Los Angeles, as well as Professor Emeritus of Sociology and Planning, University of California, Berkeley. He has published 26 books including the trilogy *The Information Age: Economy, Society, and Culture*, which has been translated into 22 languages. Dr. Paolo Gerbaudo is currently an associate lecturer in Digital Culture and Society at King's College, London. Both Castells and Gerbaudo have highlighted some of the significant uses of Web 2.0 platforms to communicate and organize in their respective books; *Networks of Outrage and Hope: Social Movements in the Internet Age* by Castells; and Gerbaudo's book, *Tweets and the Streets: Social Media and Contemporary Activism*. They have each described the social movement environments which have occurred in Egypt, Spain and the U.S. but with varying ideas of how they are coordinated and organized.

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<sup>107</sup> Ibid., 73.

Some of the salient points and observations with respect to both Castells and Gerbaudo are their views on how these social movements communicate and organize as networks. Castells explains the uniqueness and complexities of Web 2.0 network coordination in cyber space;

Networks are within the movement, with other movements around the world, with the Internet blogosphere, with the media and with society at large. Networking technologies are meaningful because they provide the platform for this continuing, expansive networking practice that evolves with the changing shape of the movement. Although movements are usually rooted in urban space through occupations and street demonstrations, their ongoing existence takes place in the free space of the Internet. Because they are a network of networks, they can afford not to have an identifiable centre, and yet ensure coordination functions, as well as deliberation, by interaction between multiple nodes. Thus they do not need a formal leadership, command and control centre, or a vertical organization to distribute information or instructions. This decentralized structure maximizes chances of participation in the movement, given that these are open-ended networks without defined boundaries, always reconfiguring themselves according to the level of involvement of the population at large. It reduces the vulnerability of the movement . . . against its adversaries and against its own internal dangers of bureaucratization and manipulation.<sup>108</sup>

Of interest with this organizational structure is that it follows some of the concepts that are found in organizational theory such as with a “lattice organization.” Bill Gore, co-founder of W.L. Gore and Associates explains the concept;

A lattice organization is one that involves direct transactions, self-commitment, natural leadership, and lacks assigned or assumed authority. . . . Every successful organization has a lattice organization that underlies the façade of authoritarian hierarchy. It is through these lattice organizations that things get done, and most of us delight in going around the formal procedures and doing things the straightforward and easy way.<sup>109</sup>

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<sup>108</sup> Manuel Castells, *Networks of Outrage and Hope: Social Movements in the Internet Age* (Malden, MA: Polity Press, 2012), 221-222.

<sup>109</sup> W. L. Gore and Associates, “The Lattice Organization,” Stetson.edu, accessed May 6, 2014, [http://www2.stetson.edu/~bboozer/Gore\\_lattice.pdf](http://www2.stetson.edu/~bboozer/Gore_lattice.pdf).

One aspect of this structure through the use of Web 2.0 platforms is that it enhances and fosters person-to-person communication without formal leaders and thrives on the sharing of ideas to find innovative solutions to problems. From this perspective one can see the realities of what Shirky was explaining in terms of many-to-many forms of communication. Castells elaborates further on this phenomenon as “mass-self communication;” where the mass is the many-to-many aspects inherent with Web 2.0 communications that consists of “endless networks,” and it is self-communication because the sender is autonomously producing the self-directed message which is then self-selected by the receiver in the networks of communication.<sup>110</sup> According to Castells these “digital networks of horizontal communication are the fastest and most autonomous, interactive, reprogrammable and self-expanding means of communication in history.”<sup>111</sup> Other organizational concepts inherent with these “new species of social movement(s)” have been argued by Dr. Paolo Gerbaudo. However, he has certain reservations about the ideas of “horizontal, leaderless, consensus-based open meeting” type of constructs when it comes to new social movements.<sup>112</sup>

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<sup>110</sup> Castells, 6-7.

<sup>111</sup> Ibid., 15.

<sup>112</sup> Ibid., 180.



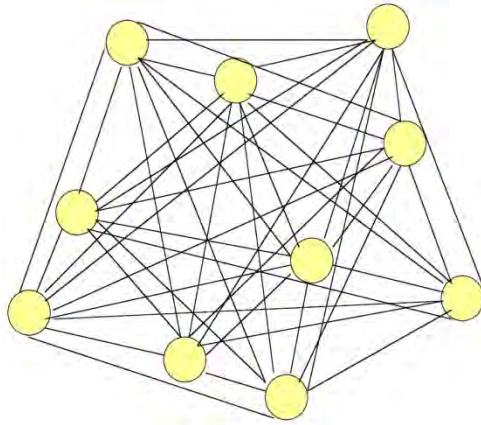


Figure 2. The Lattice Organization

*Source:* W. L. Gore and Associates, “The Lattice Organization,” Stetson.edu, accessed May 6, 2014, [http://www2.stetson.edu/~bboozar/Gore\\_lattice.pdf](http://www2.stetson.edu/~bboozar/Gore_lattice.pdf).

NOTE: The image of a Lattice Organization structure where the focus is on every person interacting directly with every other person without any intermediaries. Through Web 2.0 one can see the rise of many-to-many communications in this design.

Gerbaudo has taken a different view of these complex social movement networks from the perspective that they are not “entirely ‘spontaneous’ or ‘leaderless’—as many pundits, journalists, activists and academics alike have suggested.”<sup>113</sup> One critique that he has is on the “ideology” of “horizontalism” which is a concept that Jeffrey Juris, a student of Castells, has described these social movements as.<sup>114</sup> According to Juris these new “horizontal” networks have their own form of “networking logic” for political decision making, such as a focus on being “leaderless” when it comes to “consensual decision-making and participation.”<sup>115</sup> Castells also reinforces this concept by stating, “The

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<sup>113</sup> Paolo Gerbaudo, *Tweets and the Streets: Social Media and Contemporary Activism* (New York: Pluto Press, 2012), 13.

<sup>114</sup> *Ibid.*, 24.

<sup>115</sup> *Ibid.*

decision-making power for a given occupied site is exclusively in the hands of the General Assembly, it is a 'horizontal, leaderless, consensus-based open meeting.'"<sup>116</sup> What they are saying is that these movements do not want traditional leaders to represent them; they want to be flat in order to share ideas through a form of consensus. There is a heavy emphasis on these new network models to foster the ideals for a re-organized society that are built on the concepts of being "'self-generating and self-organizing'" as well as "'self-produced, self-developed, and self-managed,'" without hierarchies or formal leaders and being "'open.'"<sup>117</sup> It is a shift, due to technological innovations from "the pyramidal structures characteristic of bureaucratic organizations—the company, the party, the state—to networks . . . that are more "flexible and adaptable structures."<sup>118</sup> One can find this mindset with Intel. Ted Holf of Intel describes the origins of the Intel organizational structure which was focused on meritocracy and institutionalized by Robert Noyce, co-founder of Intel. Holf explains, "The idea is people should not have to go up through a chain of command, if you need to talk to a particular manager you go to him and you talk to him. To get away from the hierarchy that was characteristic of really large corporations where everything has to be done, you know, in a very rigid manner."<sup>119</sup> Gerbaudo is arguing that these movements do have leaders or 'soft leaders' who are more like choreographers or mediators managing these complex fragmented and

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<sup>116</sup> Castells, 180.

<sup>117</sup> Gerbaudo, 24 and 26.

<sup>118</sup> Ibid., 22.

<sup>119</sup> PBS, "American Experience: Silicon Valley," February 5, 2013, accessed May 8, 2014, <http://video.pbs.org/video/2332168287/>.

dispersed networks.<sup>120</sup> His focus is on figuring out “who are the ‘choreographers’ of public gatherings, the people initiating and guiding them.”<sup>121</sup> Although Gerbaudo argues against some of Castells concepts he still agrees with Castells and others like Juris that these structures are complex, fluid and difficult to understand while they are communicating and organizing in cyber space. A great example of what this communication looks like in cyber-space using Web 2.0 platforms has been described by Wael Ghonim in his book *Revolution 2.0: The Power of the People is Greater than the People in Power*.

On December 17, 2010 in the small Tunisian town of Sidi Bouzid, a twenty-six year old fruit and vegetable street vendor named Mohamed Bouazizi set himself on fire in front of a government building.<sup>122</sup> It was in response from repeated confiscations of his merchandise from corrupt local police who consistently had asked for bribes.<sup>123</sup> Mohamed Bouazizi would become a symbol and the spark for the Arab Spring, and would be an example for other movements across the Middle East such as with Egypt.

For Ghonim and Egypt, it all started on June 8, 2010 with the Facebook posting of a disfigured and bloodied image of Khaled Mohamed Said, a twenty-eight year old from Alexandria.<sup>124</sup> He had been allegedly dragged from an Internet café and beaten to death

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<sup>120</sup> Gerbaudo, 40.

<sup>121</sup> Ibid., 44.

<sup>122</sup> Castells, 22.

<sup>123</sup> Ibid.

<sup>124</sup> Wael Ghonim, *Revolution 2.0: The Power of the People is Greater than the People in Power* (New York: Houghton Mifflin Harcourt, 2012), 58.

by the Egyptian secret police two days prior over a Facebook video he had had in his possession of certain secret police colleagues “allegedly dividing confiscated drugs and money.”<sup>125</sup> The brutal image of Khaled Said moved Ghonim to create his own Facebook page representing the event and others like it that had occurred in Egypt by a repressive and corrupt government. What made Ghonim unique and successful with his Facebook page was his education and Google Executive position.

Ghonim was educated in business marketing management with a degree in computer engineering and an MBA from the American University in Cairo.<sup>126</sup> He was also head of marketing for Google in the M.E. and North Africa.<sup>127</sup> These two skill sets are what helped him to not only to create his Facebook page but to manage it in a highly creative and unconventional way. The first step for Ghonim was to spread information about Khaled Said’s murder and he did this by scanning the existing Facebook pages that were already out there. His primary concern was that he did not want his page to come across as being political in nature because he wanted to draw in a mainstream audience.<sup>128</sup> This approach is what lead him to creating a “short and catchy” page name that was all inclusive titled “*Kullena Khaled Said* - “We Are All Khaled Said.”<sup>129</sup> By doing this he not only tapped into a large audience but he also formulated it a way that created an emotional bond with his audience as he states, “it expressed the compassion

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<sup>125</sup> Ibid., 65.

<sup>126</sup> Ibid., 13 and 25.

<sup>127</sup> Ibid., 25.

<sup>128</sup> Ibid., 59.

<sup>129</sup> Ibid., 59-60.

that people immediately felt when they saw the Khaled Said's picture."<sup>130</sup> The next creative step that Ghonim took was that he took on the role of administering the Facebook page in an anonymous manner and he "spoke on the page in the first person, posing as Khaled Said."<sup>131</sup> This creative approach allowed him to leveraged the Internet's ability to mask one's true identity through the enhanced means found with digital mediated communication versus face-to-face.<sup>132</sup> Ghonim's thinking was that he could speak for Khaled Said as if he "was speaking from his grave."<sup>133</sup> Additionally this approach made it look like he was one of the mass audience and not some organization or political party managing the Facebook page.<sup>134</sup> The third step that Ghonim took was that he used the colloquial Egyptian dialect that was more meaningful to the Egyptian youth and he avoided classical Arabic that was the language more associated with activists and the regime.<sup>135</sup> By doing this he was able to keep and maintain his audience for a considerable length of time as he engaged in conversations to build up momentum. The fourth creative step that Ghonim took was that he urged followers to "link to the page."<sup>136</sup> This linking is what has made Web 2.0 platforms such as Facebook a powerful framing method in presenting the same message or theme but through numerous other means.

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<sup>130</sup> Ibid., 60.

<sup>131</sup> Ibid., 60-61.

<sup>132</sup> Baym, 54-55.

<sup>133</sup> Ghonim, 61.

<sup>134</sup> Ibid.

<sup>135</sup> Ibid., 61.

<sup>136</sup> Ibid., 63.

To understand the exponential power of linking through Web 2.0 platforms, David Scott explains how it actually works;

A great way to extend the potential reach of your content—to people you do not even know yet—is to make it easy for your reader to share your content with their networks. The best way to do this is to include share buttons on each important page of your site. Your videos, white paper download pages, blog posts, and similar content should definitely have them. Share buttons makes it easy for people to point to your content on social networking sites like Facebook, StumbleUpon, Digg, and Twitter. An example of a share button is the little thumbs-up button on Facebook. When your fans push that button on your website, the news that they like it is then reported to their Facebook friends. It sounds like such a simple thing, but these buttons are one of the most effective ways to share content on the web.<sup>137</sup>

This is why there is great potential to reach viral effects with Web 2.0 platforms due to their linkages of likeminded information and exponential sharing capabilities. The other related aspect to the Facebook page with regards to its linkages, is how it is arrayed or laid out for the viewers. Because everything is now digitized through all of the various new media tools such as; text, images, audio, and video the audience is being framed from every available means for communication and influence. They are not just reading an isolated book, looking at an isolated photo, listening to an isolated radio broadcast in their car or an isolated TV broadcast in their home; they are seeing all of those various digitized forms of information within the frame of their computer screen as they view the Facebook page.

Richard Perloff in his book *The Dynamics of Persuasion: Communication and Attitudes in the 21st Century*, explains the power of framing information. He describes the frame as “the slant, focal point, or frame of reference.”<sup>138</sup> Additionally, as explained

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<sup>137</sup> Scott, *The New Rules of Marketing and PR*, 194-195.

<sup>138</sup> Perloff, 276.

by communication researcher Robert Entman, he states that framing “is to select some aspects of a perceived reality and make them more salient in a communicating text in such a way as to promote a particular problem definition, casual interpretation, moral evaluation, and/or treatment recommendation.”<sup>139</sup> Additionally, Perloff explains;

Research has documented that simply varying the way a message is framed can strongly influence attitudes. Different versions contain the same facts, but they communicate the information through different frames of reference. . . . Frames work by accessing a particular perspective on an issue. Frames can activate mental frameworks, and when the mental frameworks differ in their implications for decision making, the results can be dramatic.<sup>140</sup>

An example of the power of framing a message and activating mental frameworks has been highlighted by Anthony Pratkanis and Elliot Aronson in their book *Age of Propaganda: The Everyday Use and Abuse of Persuasion*. The example they provide was based off of studies that were conducted by Elizabeth Loftus that were designed to understand the power of framing leading questions for eyewitnesses.<sup>141</sup> In one particular study subjects were presented with a film that showed multiple cars colliding and after the viewing “some of the subjects were asked, ‘about how fast were the cars going when they *smashed* into each other?’”<sup>142</sup> With another group of subjects who viewed the same film the word *smashed* was replaced with the word hit.<sup>143</sup> With the framing of the word *smashed* the subjects believed that the vehicles “were going significantly faster” and after

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<sup>139</sup> Ibid.

<sup>140</sup> Ibid.

<sup>141</sup> Anthony Pratkanis and Elliot Aronson, *Age of Propaganda: The Everyday Use and Abuse of Persuasion* (New York: Henry Holt and Company, 2001), 97-98.

<sup>142</sup> Ibid., 97.

<sup>143</sup> Ibid., 98.

a week they believed that there was broken glass at the accident scene even though no glass was present in the video.<sup>144</sup> This is just one example among many in how the careful framing words and images can cause individuals to potentially create additional mental images that were never there in the first place. With regards to Facebook the digital tools for framing and linking messages has the exponential power to possibly persuade more effectively. Other realities that are involved with Web 2.0 platforms are Ghonim's unique ability to persuade his audience to go from the safety of cyberspace to the dangerous public space of Tahir Square. Some of these techniques are associated with cognitive dissonance theory and the psychological technique called modeling the convert communicator.

Due to Ghonim's background in business marketing he was able to apply a modified version of a marketing model called a 'sales tunnel' to his interactive Facebook page.<sup>145</sup> In order to generate public support for the cause he developed a four phased strategy which he explains;

The first phase was to convince people to join the page and read its posts. The second was to convince them to start interacting with the content by 'liking' and 'commenting' on it. The third was to get them to participate in the page's online campaigns and to contribute to its content themselves. The fourth and final phase would occur when people decided to take activism onto the street. This was my ultimate aspiration.<sup>146</sup>

There are many realities that are critical to understand with these four phases. One is that it addresses Castells concept of 'space of flows' which is composed of flows of

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<sup>144</sup> Ibid.

<sup>145</sup> Ghonim, 67.

<sup>146</sup> Ibid., 67-68.



information, technology, images, sounds and symbols all within the space of cyber.<sup>147</sup>

For Ghonim the challenge is in managing this complex space and moving it to the more tangible ‘space of places’ or as Castells describes the complex process “a hybrid networked movement that links cyberspace and urban space in multiple forms of communication.”<sup>148</sup> To do this Ghonim has to manage the dialogue that takes place on the Facebook page and help his followers to overcome the safety that they have behind their individual computer screens and the fears inherent with moving into public space where potential retaliation could take place at the hands of the Egyptian secret police. This is where cognitive dissonance theory comes into play.

In 1957 Leon Festinger developed the theory of cognitive dissonance.<sup>149</sup>

Dissonance is “discord, incongruity, or strife,” and it becomes cognitive dissonance when there is “incongruity among thoughts or mental elements.”<sup>150</sup> As defined by Abelson Aronson it is “a negative, unpleasant state that occurs whenever a person holds two cognitions that are psychologically inconsistent.”<sup>151</sup> Additionally dissonance is explained as;

(a) holds two clearly incongruent thoughts, (b) makes a decision that rules out a desirable alternative, (c) expends effort to participate in what turns out to be a less

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<sup>147</sup> Hands, 42.

<sup>148</sup> Castells, 177.

<sup>149</sup> Perloff, 322.

<sup>150</sup> Ibid.

<sup>151</sup> Ibid., 323.

than ideal activity, or (d) in general is unable to find sufficient psychological justification for an attitude or behavior he or she adopts.<sup>152</sup>

For Ghonim the art was in trying to help his movement overcome “two cognitions that are psychologically inconsistent” such as moving them from the safety of cyber space (‘space of flows’) to public space (‘space of places’) where safety and fear are in conflict with each other. First, Ghonim had individuals take photos of themselves as he states;

The page needed to speak directly to its members and convince them to be active participants, and it was also important to break free from all the barriers of fear that controlled so many of us. So I came up with an idea that served both goals: I asked members to photograph themselves holding up a paper sign that said ‘*Kullena Khaled Said.*’ Hundreds of members did so, and we began to publish their pictures on the page. The images created an impact many times stronger than any words posted on the page.<sup>153</sup>

This was the very first step that Ghonim took to build a psychological foundation for moving individuals from the comforts and safety found within their homes to the potential fearful realities that were associated with the streets of Egypt. Next, the innovative idea of a “silent expression of disapproval” was emailed to Ghonim to further overcome fears. Ghonim called it a “Silent Stand” where the goal was that members would take positive action to the street by wearing black t-shirts and bringing along a copy of the Qur’an or Bible and read it.<sup>154</sup> It would be passive in nature, avoiding a physical altercation with security forces, yet still putting pressure on the Ministry of Interior.<sup>155</sup> Once members formed on the streets they would again take pictures of

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<sup>152</sup> Ibid.

<sup>153</sup> Ghonim, 68.

<sup>154</sup> Ibid., 70-71.

<sup>155</sup> Ibid., 71.

themselves and post them on Facebook for all to see.<sup>156</sup> By doing this action it demonstrated the psychological technique called modeling the convert communicator.

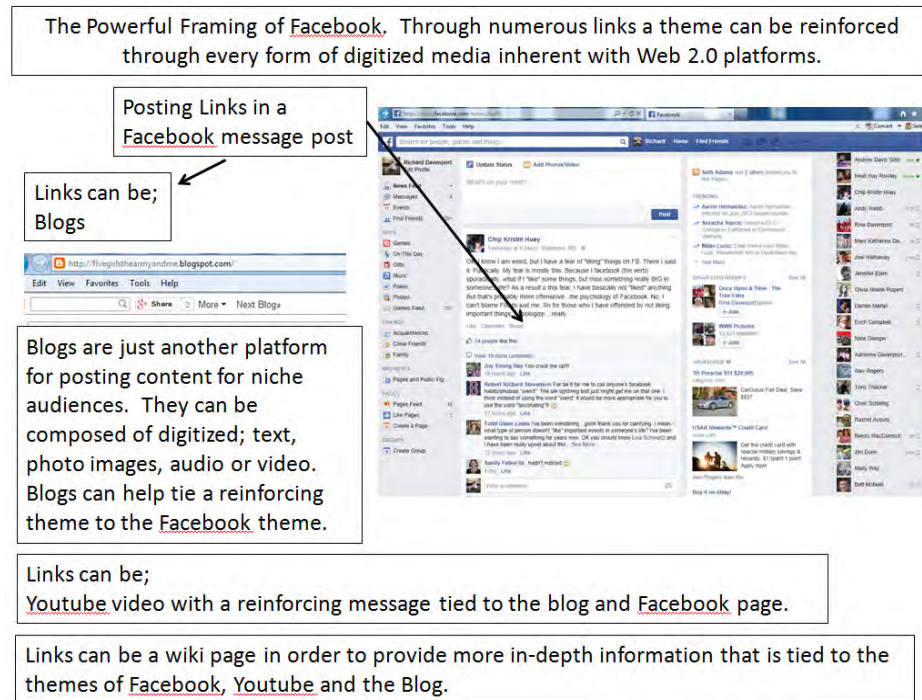


Figure 3. Facebook Page

*Source:* The author's Facebook page.

NOTE: The powerful framing realities of a Facebook page. Message content when it is framed for a particular audience can be exponentially more powerful than any other method to persuade through Web 2.0 platforms. The major reason for this is that Facebook through various digital links can present the viewer a framed message that can be reinforced through every digitized means for communication. The viewer can see not only digitized written text but can view and hear digitized photos, digitized audio messages and digitized video messages. As Dave Kerpen has modified the age old saying, "A picture is worth a thousand words, and a video is worth even more." Add in the capabilities for others to create and add content to the theme makes this a powerful force for persuasion and makes them feel like they are psychologically attached to any cause.

<sup>156</sup> Ibid., 73.

Kelton Rhoads is currently a professor at the University of Southern California's Annenberg School for Communication and has listed thirteen propaganda techniques in his article "Propaganda Tactics and Fahrenheit 9/11." One of those listed was modeling the convert communicator where he states; "First, *Modeling*: Humans are much more likely to perform a behavior if they see someone else performing it successfully.

Psychologists call this process 'modeling the behavior.'<sup>157</sup> Rhoads presents an example that was conducted by the famous clinical psychologist Albert Bandura;

In one study, he was trying to resolve the phobias of children who were terrified of dogs. His therapy was nothing more than allowing these children to watch *other* children playing with a dog, either live or in film clips, for 20 minutes a day. After four days, over two-thirds of the formerly fearful children were willing to climb into a pen and remain confined with a dog, petting and playing with the animal.<sup>158</sup>

The "Convert Communicator" is described by Rhoads as a "special sort of model and "are often of low social status."<sup>159</sup> However, this "low social status" individual can be very persuasive to others if he or she is able to move from one lifestyle to another.

Rhoads describes the phenomenon;

But there's something a low status communicator can do to become spectacularly persuasive. They can reverse their positions! Convert Communicators are persuasive because they have converted dramatically from one ideology or lifestyle to an opposite one and with that change can come an equally dramatic enhancement of credibility—and from credibility, persuasiveness. Inside Alcoholics Anonymous, those who have spent the most years drinking, and have reformed, usually have the most status. A former felon, who has come clean and now uses his skills to combat robbery or computer fraud, is seen as extraordinarily

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<sup>157</sup> Kelton Rhoads, "Propaganda Tactics and Fahrenheit 9/11," Working psychology.com, September 11, 2004, accessed March 12, 2014, [http://www.workingpsychology.com/download\\_folder/Propaganda\\_And\\_Fahrenheit.pdf](http://www.workingpsychology.com/download_folder/Propaganda_And_Fahrenheit.pdf).

<sup>158</sup> Ibid.

<sup>159</sup> Ibid., 17.

knowledgeable and believable. Researchers have discovered that intravenous drug users found ex-drug users more credible than a physician, or the surgeon general of the United States!<sup>160</sup>

Ghonim was very clever in utilizing both psychological approaches with cognitive dissonance theory and the psychological technique found with modeling the convert communicator to help his movement be successful in reducing and overcoming fear. Additionally, what made this movement so successful was that these images that were being taken and uploaded to Facebook told a story or a narrative for each individual and the movement itself.

The powerful impact of storytelling through images has been leveraged by some companies within marketing. Dave Kerpen, the author of *Likeable Social Media* states;

A picture is worth a thousand words, and a video is worth even more. When telling stories online, pictures and photographs are incredibly powerful tools. A huge reason for Facebook's explosive growth over the past five years is their addictive Photos product—as people naturally love to view and share photos.<sup>161</sup>

One reason for this business focus is to get potential buyers to post stories through either photos or video about themselves as it relates to the business brand. This is a powerful technique to help sales as CEO Matthew Weiss of the New York traffic-ticket-fighting firm 888 RED LIGHT has stated, 'the best storytelling tool I've got.'<sup>162</sup> Kerpen writes, "Storytelling, through Weiss's blog, Facebook, and Twitter use, are what he attributes to

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<sup>160</sup> Ibid.

<sup>161</sup> Dave Kerpen, *Likeable Social Media: How to Delight Your Customers, Create an Irresistible Brand, and Be Generally Amazing on Facebook and other Social Networks* (New York: McGraw-Hill Books, 2011), 147.

<sup>162</sup> Ibid.

a 22 percent increase in business year to year.”<sup>163</sup> However, there is a deeper psychological reality going on with stories and narratives. As described by Weiss, “People love hearing stories. It goes back to primitive tribal times when we used to sit around the campfire.”<sup>164</sup> Perloff also lays out the definition proposed by Leslie Hinyard and Matthew Kreuter as; “any cohesive and coherent story with an identifiable beginning, middle, and end that provides information about scene, characters, and conflict; raises unanswered questions or unresolved conflict; and provides resolution.”<sup>165</sup> Additionally Perloff explains how narratives change beliefs and attitudes;

Narrative persuasion—the telling of stories—can powerfully influence attitudes. The 19th-century novel *Uncle Tom’s Cabin* is widely believed to have stirred the conscience of Northerners in the United States, helping lay the groundwork for the Civil War. Narratives depicted in movies can also change beliefs and attitudes.<sup>166</sup>

One psychological reason for why narratives are so powerful in changing strong attitudes is the idea of “transportation,” a concept proposed by Melanie Green and Timothy Brock.<sup>167</sup> Perloff explains the idea of the viewers transporting themselves into the characters or scenes of the stories. Perloff states, “Psychologically transported or immersed in a story, individuals generate mental images of events that, while literally untrue, play out figuratively in their minds, inducing questioning of existing beliefs.”<sup>168</sup>

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<sup>163</sup> Ibid.

<sup>164</sup> Ibid., 144.

<sup>165</sup> Perloff, 270.

<sup>166</sup> Ibid., 271.

<sup>167</sup> Ibid., 272.

<sup>168</sup> Ibid.

Again, this “transportation” phenomenon can be found with Ghonim’s clever use of deceased Khalid Said where his Facebook followers transport themselves into the martyred hero who represents all of their frustrations with the repressive Egyptian regime. Also, reinforcing the power of storytelling through Web 2.0 platforms in social movements Castells explains;

There is a constant practice of storytelling in the movements, with everybody taking pictures and making videos, and uploading them to YouTube and to multiple social networking sites. This is the first kind of movement that tells every day its own story in its multiple voices in a way that transcends both time and space, projecting itself in history and reaching out to the global visions and voices of our world.<sup>169</sup>

All of this integrated story telling through images and video are powerful influencers that help to solidify the movement’s cause and can eventually lead to action in the streets to put pressure on existing governments. However, what is important to understand is that power abhors a vacuum and once these ‘leaderless’ or ‘choreographed’ movements remove the government that is in place it can often lead to chaotic situations.

Having described the rise of networked social movements one can see the complex nature behind their ability to organize and communicate within cyberspace using Web 2.0 platforms. Many leading sociologists have made attempts to point out not only how they resemble self-organized, flat, leaderless and autonomous but they also use many psychological theories and other techniques to move from immaterial cyberspace to physical public space. Some of these potential theories are cognitive dissonance and some techniques are in the creative use of framing, convert communicator and the creative use of niche narratives through all of the various new media digitized tools.

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<sup>169</sup> Castells, 177-178.

Additionally once these leaderless movements begin to put pressure on existing governments, they have the potential to creating messy situations. As described by Castells with reference to the Middle East he writes, “In Yemen, Libya, and Syria, initially peaceful movements were met with utmost violence from the dictatorships, degenerating in civil wars that transformed these countries into battlefields where geopolitical contenders fought to assert their influence.”<sup>170</sup> These contenders more often than not are a complex mixture of non-state actors vying for power and there is not a more global non-state actor than the networked movement Al Qaeda.

#### Networked Non-state Actors’ use of Web 2.0

The interactive Web’s organizational principles resemble and inadvertently mimic the organizational principles of some modern insurgent movements: initiative, anonymity, self-recruitment, varying levels of participations, self-motivated participants, often self-funded, fueled by idealism, not by orders.<sup>171</sup>

During the months of October and November 2001, U.S. and allied forces were able to kill nearly 500 Al Qaeda forces that had fought to the death in Afghanistan.<sup>172</sup> What was unique about this event and Tora Bora was that “80 percent of the mujahideen had been eliminated” in Afghanistan.<sup>173</sup> Based off of these events at the time, one of Al Qaeda’s “most important and most impressive strategic minds of global jihad,” Abu Musab al-Suri, decided the organization had to become harder for U.S. technological

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<sup>170</sup> Ibid., 94.

<sup>171</sup> Rid and Hecker, 32-33.

<sup>172</sup> Rohan Gunaratna, *Inside Al Qaeda: Global Network of Terror* (New York: The Berkley Publishing Group, 2002), 80.

<sup>173</sup> Rid and Hecker, 190.



firepower to target them.<sup>174</sup> Through intellectual prowess al-Suri made the fundamental mental shift of Al Qaeda's existing hierarchical group and restructured it to reflect a movement that was flat or decentralized and composed of organizationally independent or autonomous cells.<sup>175</sup> This cellular and "leaderless" type of organization is nothing new and has been used by many organizations in the past to circumvent and make it extremely difficult for a top down pyramid type of organization to find and destroy. What has made it even harder to detect is that al-Suri specifically merged the uses of Web 2.0 platforms to help facilitate his concepts of future cells to become (self-) radicalized and (self-) recruited in order to continue the exponential growth of the movement without any centralized leadership.<sup>176</sup>

Thomas Rid and Marc Hecker explain the powerful shift in Al Qaeda's use of Web 2.0 to maximize efficiency;

Had al-Suri spent some time in the late 1990s not in Shah-i-Kot but in Silicon Valley, he might have recognized the philosophical and metaphorical similarities between the organizational form he propagated for Islamic resistance and the new organizational logic propagated by Web 2.0 aficionados: both assumed entrepreneurial individuals as part of a global community of like-minded activists, self-motivated participation, decentralized networks, self-administration, a common purpose, and global collaboration; both tolerated anonymity and the use of pseudonyms, heterogeneous levels of participation, and fuzzy membership; both were created not out of necessity or in a top-down fashion, but evolved imbued with a pragmatic spirit, from the bottom up; and both combine proven organizational patterns and necessary components of authority and command with leaderless initiatives.<sup>177</sup>

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<sup>174</sup> Ibid.

<sup>175</sup> Ibid., 190.

<sup>176</sup> Ibid., 193.

<sup>177</sup> Ibid.

Tim Finin, author of “Anonymous, leaderless resistance and Scientology,” reinforces the simplicity of Web 2.0 communication stating, “Today’s new communication infrastructures make it easier for such distributed resistance movements to take hold and grow. Information, instructions and loose coordination can be spread via Web pages, Blogs, text messages, IRCs, mailing lists, etc.”<sup>178</sup> Not only is it easy for Al Qaeda to use various Web 2.0 platforms to recruit and “self-radicalize” jihadists, it is also easy to avoid detection through the use of numerous available commercial encryption software. Steve Murdoch states, “easily available encryption and anonymous communication software can resist surveillance, and, in practice, the sheer quantity of information flowing over the Internet is a major obstacle to effective surveillance for any but the most sophisticated intelligence services.”<sup>179</sup> Ghonim also explains the use of open source software to hide IP addresses, he explains, “I used a proxy program called Tor which constantly changed my IP address, masking my location by delivering the address from different countries.”<sup>180</sup> This easy to access commercial software is available to anyone who wants to deter any kind of surveillance while using Web 2.0 tools. Additionally, if a repressive government decides to try and shut down the Internet or certain IP addresses, other ingenious workarounds such as “telephone landlines . . . fax machines, ham radio and dial-up

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<sup>178</sup> Tim Finin, “Anonymous, leaderless resistance and Scientology,” ebiqumty.umbc.edu, January 26, 2008, accessed, May 12, 2014, <http://ebiqumty.umbc.edu/blogger/2008/01/26/leaderless-resistance-against-the-church-of-scientology/>.

<sup>179</sup> Steven Murdoch, “Destructive Activism: The Double-Edged Sword of Digital Tactics,” in *Digital Activism Decoded: The New Mechanics of Change*, ed. Mary Joyce (New York: International Debate Press, 2010), 142.

<sup>180</sup> Ghonim, 82.

modems” can be used as alternative means to communicate.<sup>181</sup> Due to the anonymous nature that the Internet fosters, there may be some creative ways in order to disrupt recruiting and propaganda efforts conducted by Al Qaeda operatives. The first step is in understanding social networks.

In Charles Kadushin's book, *Understanding Social Networks: Theories, Concepts and Findings*, he describes basic social networks as not only decentralized but dense in some cases and in other cases linked to “weak ties.” In terms of Al Qaeda they do have density within the network but typically only within very small cells of 2-4 core members. As described by Kadushin “smaller networks will have greater density. It is easier to know everyone in a small group than in a large community.”<sup>182</sup> Penetrating these “small groups” is very difficult through counter ideological messaging. Even when a hardened Al Qaeda member is turned and then starts to counter the hard-line Salafi Al Qaeda narrative, other prominent high ranking members such as Zawahari will then counter their efforts and delegitimize them.<sup>183</sup> However, with the Internet, there may be some creative ways that can be used to disrupt the recruiting and ideological efforts of Al Qaeda.

Within these small isolated dense cells there is a psychological safety need that is taking place. Kadushin highlights the psychological need where people will not try new forms of behavior or various activities unless they feel safe enough to do them.<sup>184</sup> These

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<sup>181</sup> Castells, 63.

<sup>182</sup> Kadushin, 29.

<sup>183</sup> Rid and Hecker, 195-196.

<sup>184</sup> Kadushin, 59.

activities can include 'feelings of physical, intellectual, and psychological relaxation, which are all important towards building closer relationships.<sup>185</sup> Penetrating this can be potentially accomplished through what Kadushin has described as weak ties and the psychological need for efficacy which can weaken the dense cell through the concept of “structural holes.”<sup>186</sup>

Even though these cells can be dense they are not completely isolated. There are some interactions through various weak ties which help to spread information, some of this could be other existing relationships outside of the cell. As described by Kadushin weak ties are important for two reasons; one they help facilitate the flow of information from distant parts of a network, and two they help to link and integrate other social systems that are outside of the dense network.<sup>187</sup> In terms of penetrating the dense small cell of Al Qaeda that uses the Internet for collaboration, weak ties can help to disrupt and encourage the creation of structural holes.

As described by Kadushin structural holes are created when members of the dense cells begin to have thoughts that move them from the needs of safety to the needs of efficacy. These efficacy thoughts are entrepreneurial in nature such as “the will to conquer; the impulse to fight, to prove oneself superior to others, to succeed for the sake . . . of success itself.’ In short to be effective.”<sup>188</sup> He explains the focus on efficacy rather than cohesion through density;

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<sup>185</sup> Ibid.

<sup>186</sup> Ibid., 29-30 and 59.

<sup>187</sup> Ibid., 31.

<sup>188</sup> Ibid., 63.

We can turn the concept of density in social networks on its head, as it were, and look to the holes in the network, the lack of connectedness, rather than to cohesion. . . . By focusing on holes rather than the connections, we concern ourselves more with efficacy than safety. In competitive situations, other people's cohesion can be a disadvantage.<sup>189</sup>

Again, Kadushin strengthens the argument for greater focus on potential *structural holes* for possible communication disruption efforts;

Since both safe-affiliation-trust-density and effectiveness-competition-structural holes situations are inherent motivations and present in all social networks, when does the one or the other become more salient? 'Keeping up with the (equivalent) Joneses' as a status-seeking correlate of efficacy motives is an attribute of situations with many structural holes rather than situations of high cohesion.<sup>190</sup>

There are some examples that can be found with existing Al Qaeda *electronic jihad* efforts.

In 2003 certain chapters from a book titled *39 Ways to Serve and Participate In Jihad* appeared on Internet forums.<sup>191</sup> The book's primary focus was on how future jihadists could participate in Jihad without ever leaving the comforts of their home.<sup>192</sup>

One specific chapter, as described by its author, Mohammad bin Ahmad al-Salem, focused on the idea of "electronic jihad" where the Internet would "benefit us greatly by making it possible for people to distribute and follow the news' and 'publicize ideas and goals.'"<sup>193</sup> Both Rid and Heckler describe Al Qaeda's extensive use of the Web, "Al Qaeda is clearly using the Web to spread its message. Two new features are remarkable:

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<sup>189</sup> Ibid., 62.

<sup>190</sup> Ibid., 63.

<sup>191</sup> Rid and Hecker, 194.

<sup>192</sup> Ibid.

<sup>193</sup> Ibid.

the extent to which Al Qaeda is using the Web to reach out interactively to its supporters, and new formats that circumvent the egalitarianism that is built into anonymous forums.”<sup>194</sup> The numerous chat forums that Al Qaeda uses to spread the ideas of “electronic jihad” through dialogue can be found with Younis Tsouli (aka Irhabi007).

In 2001 Tsouli was a twenty-two-year-old London college IT-student who decided to join the jihad cause.<sup>195</sup> Tsouli later joined an existing jihad forum and he was not impressed with the technological sophistication or creativity of the forums. He therefore “pioneered fresh and rather effective propaganda methods and started a career that made him a ubiquitous figure in Al Qaeda’s online activity.”<sup>196</sup> His creative online efforts were noticed by Abu Musab al-Zarqawi who then “decided to ‘recruit him’— although that recruitment did not result in Tsouli physically training in Pakistan or joining an open front in Iraq or Afghanistan or elsewhere.”<sup>197</sup> It is in this Web 2.0 context of anonymity where the ideas of efficacy and structural holes can come into play.

One example in how to reach an anonymous Tsouli is to understand the nature of what he actually does online and the psychological conditions which he is associated with. Rid and Heckler describes an online conversation where psychological conditions are apparent;

Dude, Tsouli complained to another online-jihadist, who chose the pseudonym Abuthaabit, my heart is in Iraq.  
*Abuthaabit*: How are you going to have enough to go there?

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<sup>194</sup> Ibid., 196.

<sup>195</sup> Ibid., 198.

<sup>196</sup> Ibid.

<sup>197</sup> Ibid.

*Irhabi007*: I suppose someone gotta be there!

*Abuthaabit*: This media work, I am telling you, is very important. Very, very, very, very.

*Irhabi007*: I know, I know.

*Abuthaabit*: Because a lot of the funds brothers are getting is because they are seeing stuff like this coming out. Imagine how many people have gone [to Iraq] after seeing the situation because of the videos. Imagine how many of them could have been shaheed {martyrs} as well.

This brief exchange illustrates well the tie between online organization and offline action, between domestic audiences and audiences in theater. Tsouli was far away from the battlefield in London, and, like many, badly wanted to have an impact on what was happening in Iraq and Afghanistan.<sup>198</sup>

Here is where the efficacy reality and potential for structural holes fits with the recruitment of others online. The fact that a jihadist wants so badly to achieve martyrdom can be a serious reality for cognitive dissonance manipulation. Tsouli felt this impact psychologically as he was stuck behind a computer screen linked to cyberspace where-as others were actually doing the fighting and dying in other physical spaces throughout the world. Through another anonymous member Tsouli can be disrupted through words that encourage him to get into the physical fight which is less important than his “very, very, very, very” important online recruiting efforts. His efforts can be denigrated because he is not actually physically fighting or dying for the greater jihad cause. Creating potential structural holes by having less *Irhabi007*s who are so effective online can potentially be a very disruptive feature to degrading ‘electronic jihad’ recruiting efforts. One potential technique that can be applied to this situation, such as moving the cyber recruiting behavior a new behavior is called the theory of planned behavior.

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<sup>198</sup> Ibid., 8.

The theory of planned behavior was conceptualized by Icek Ajzen in 1991 at the University of Massachusetts at Amherst.<sup>199</sup> Ajzen describes what it is;

The theory of planned behavior postulates three conceptually independent determinants of intention. The first is the *attitude toward the behavior* and refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. The second predictor is a social factor termed *subjective norm*; it refers to the perceived social pressure to perform or not perform the behavior. The third antecedent of intention is the degree of *perceived behavior control* which . . . refers to the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles.<sup>200</sup>

In terms of getting Tsouli to change his behavior one has to manipulate his *attitude* towards a new behavior. The key is to present the new behavior in a “favorable” light. One way to do this effectively is through the anonymous nature of cyberspace through online chat forums. It is difficult to know who is truly at the other end of an anonymous user name and online relationships can become solidified even though face-to-face encounters never occurred.<sup>201</sup> Nancy Baym in *Personal Connections in the Digital Age* has highlighted what other social psychologists have termed a phenomenon called “cognitive misers.” Baym writes;

Social psychologists have described people as “cognitive misers” who try to get as much information as possible out of as few cues as we can. In mediated environments, where there are so many blanks to fill in, people make more out of others’ small cues than we might face to face (Ellison et al., 2006). An ambiguous subject line, a single photograph, a short description, or a shared interest leads us to infer other information based on our stereotypes and assumptions about how social reality works.<sup>202</sup>

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<sup>199</sup> Ajzen, 179.

<sup>200</sup> Ibid., 188.

<sup>201</sup> Baym, 102.

<sup>202</sup> Ibid., 119.



In other words “mediated environments” through Web 2.0 platforms have created a collaborative venue where anonymous “subjective norms” have a greater impact on behavioral change due to the lack of social cues inherent in face-to-face engagements. This void of social cues leads to the realities inherent in the phenomenon of cognitive misers. The key is for the online anonymous subjective norm to convince the Tsoulis’ of Internet jihad to have a favorable attitude towards a behavior, and then to aid in increasing their perceptions of ease or efficacy in performing the behavior. Ajzen states, “As a general rule, the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual’s intention to perform the behavior under consideration.”<sup>203</sup> All of these techniques are taking place through online dialogue in order to ultimately change the behavior favorable to U.S. interests.

In attempting to understand the organizational structure and communication efforts of networked non-state actors, such as Al Qaeda, one way is to see them from the perspective of Web 2.0. As describes Web 2.0 characteristics facilitates an anonymous and decentralized type of networked organization. It also aids in better dialogue for recruiting and electronic jihad efforts without members or leaders never meeting in person. However, there may be some creative social network theories such as better understanding of structural holes and psychological theories such as planned behavior which can be applied to disrupt certain non-state actors’ use of Web 2.0 platforms.

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<sup>203</sup> Ajzen, 188.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

The purpose of this thesis was to determine whether or not the PSYOP community should enter into a greater dialogue inherent to Web 2.0 platforms. After careful analysis the answer appears to be yes. For decades the PSYOP community has been accustomed to those traditional platforms for disseminating information to any given foreign TA. Those traditional methods such as TV, Radio, or any print media will not go away in the foreseeable future and will still need to be leveraged by PSYOP to influence. However, with the invention of Web 2.0 platforms for communication, the digitization of all forms of communications through Web 2.0 platforms, and the exponential spread and use of smart phones linked through various networks, the case has been made that PSYOP will have to embrace these tools to become more effective in the future.

The critical point behind the justification for the PSYOP community to leverage Web 2.0 platforms for communication is that information is becoming less centralized and more decentralized. This decentralization of information is causing a major shift in the control of information and due to this lack of centralized control more individuals, private organizations, and non-state actors are now in greater competition with the PSYOP community. This shift is in line with the concept of many-to-many communication where traditional consumers of information are now also producers of information. In the past this was not the case and now the mass audience has more influential power than ever before. To better compete with these new realities and this

new information environment the PSYOP community will need to better educate themselves on how to effectively use Web 2.0 platforms for engagement and influence.

The many-to-many concepts can be seen in the shift in marketing where many businesses are trying to leverage the more powerful voice of the mass audience. Some of this can be seen in the audience presenting a narrative or story that supports the overall brand of a company. Due to Web 2.0, business platforms can no longer just sit back and deliver ads to influence buyers' decisions. Also businesses have to react much faster to bad news because of the exponential and viral spread of information through Web 2.0 networks. Additionally, governments have a hard time controlling the narrative due to the decentralized information environment. The new information environment consists of many narratives that are in competition now with old centralized government narratives. The many-to-many realities are also found with recent networked social movements throughout the world. Due to Web 2.0 platforms and all forms of digitized communications, various groups are able to communicate, organize online, and then organize in physical space. Lastly, Web 2.0 platforms are being leveraged to the maximum extent by non-state actors such as Al Qaeda for recruitment and also communications to enhance their operations.

### Recommendations

The subject of Web 2.0 platforms to be used by the PSYOP community for influence is lacking. In FM 3-05.301 Psychological Operations Process Tactics, Techniques, and Procedures published in 2007 (a new update is scheduled for September 2014) there is no mention of social media as a means for influence. Additionally there is not a Facebook page nor Twitter account to represent the PSYOP organization. These are

just small indicators which show that the PSYOP community needs to begin the process for educating and integrating the use of these platforms. The only other interagency partner that conducts operations to influence foreign TAs is the Central Intelligence Agency and they just created their own Facebook page and Twitter account this past June, 2014. The biggest obstacle for embracing and leveraging Web 2.0 platforms are the authorities.

In March of this year the United States Army Special Operations Command (USASOC) held the exercise Silent Quest at Fort Bragg, North Carolina. The exercise was designed to validate the new Special Operations Force operational art and design publication. During the three- day exercise, various scenarios involved Web 2.0 platforms. However, the most common point of concern that was voiced by LTG Cleveland, the Commanding General of USASOC, who asked if we have the authorities to do some of these future operations using Web 2.0 platforms. The answer is no. The current Title 10 authorities place very restrictive guidelines with regards to the U.S. Army using the borderless Internet or Web 2.0 platforms to conduct operations. One recommendation is to start a conversation among the various Joint and Army staffs on how we can essentially change the outdated rules. This could be in the form of working groups among various leaders, planners and JAG officers from the Joint Staff, the United States Special Operations Command (USSOCOM), USASOC, Joint Special Operations Command (JSOC), and Army Staff members. Additionally, leaders, planners and lawyers from various inter-agencies such as the National Security Agency and the CIA should participate as well in these discussions. With potential new authorities using Web 2.0 platforms, more education in psychological theories, technological theories and social

network theories will be needed in order to be more effective at using various techniques and influencing operations.

Creating savvy technological Web 2.0 PSYOP Teams who understand the nature of the Web 2.0 environment is one effort to get a better understanding of current trends. Some of this has already begun to take place at Fort Bragg with the newly and evolving narrative fusion cells who are being designed to deploy out to various organizations in order to help with countering various adversary narratives through social media platforms. Although the current nascent centralized model is designed to address some of the Web 2.0 narrative environment, a better approach would be a decentralized model in order to maximize efficiency. Currently the fusion cells are within the centralized group called the PSYOP Influence and Analysis Group. A more decentralized approach would be forming the fusion cells or narrative PSYOP teams inside the regionally aligned PSYOP Battalions. This would provide better integration and training for those specific regions on a yearly basis. However, due to a lack of current doctrine, training, experience, technologies, and the right personnel, these efforts will be difficult in achieving the desired effects.

When looking at the speed of the current decentralized operational information environment it is difficult for doctrine to keep up. One approach in keeping up will be leveraging the current commercial marketing trends highlighted through various publications as well as various MMAS thesis's which have been written about Web 2.0 methods. One example that shows how fast the Web 2.0 environment is changing is the fact that David Scott, author of *The New Rules of Marketing and PR* has stated that he will published a new edition of his book every two years. This is the type of new

doctrinal mindset the PSYOP community will have to take in order stay on top of a fast pace evolving Web 2.0 environment. In terms of new doctrinal areas the PSYOP community should focus on in order to enhance Web 2.0 efforts, better exploitation of psychological, technological, and social network theories should be the way ahead.

Two key social psychology theories that may need to be studied more and incorporated into doctrine are cognitive dissonance theory and the theory of planned behavior. The example of Wael Ghonim's use of Facebook which inspired thousands to protest against the Hosni Mubarak regime is just one example of how these theories can be applied through Web 2.0 platforms to influence. Also, some elements of the theory of planned behavior can be applied against Al Qaeda operations through Web 2.0 platforms. More study of these two theories can potentially help future PSYOP efforts.

Additionally, with regard to technological theories, more education on technological determinism and social construction may be needed in the future. This is due to the exponential realities of technology becoming more and more ubiquitous worldwide. As more and more individuals begin to use technological tools such as smart phones for mediated communication, it may be important to understand the psychological implications of their various uses such as how they may foster organizational structures of various non-state actors. Also, as more and more individuals, groups, private organizations and non-state actors become networked through Web 2.0 platforms it may be necessary for the PSYOP community to become more familiar with how social networks are formed, communicate online and then offline in urban space. However, the biggest changes to the PSYOP community in terms of being more effective at operating

in a purely Web 2.0 environment may be with recruiting the right personnel who also posses the right experiences.

Recruiting the right Web 2.0 type of personnel in the future the PSYOP community will want to target those Officers, NCOs and lower enlisted who have skills in using those tools such as Facebook, Twitter, YouTube, Google, and Pinterest. One recruiting model such as DARC is designed to find the right Web 2.0 personnel to serve in various marketing firms. Brian Halligan and Dharmesh Shah describe DARC as the “Digitally Inclined,” “Analytically Oriented,” “Reach Expansive,” and “Content Creator Experienced.”<sup>204</sup> The digitally inclined are going to be those individuals who “speak the web fluently.” They need to be able to answer questions like; What Web 2.0 platforms do you use or when was the last time you updated your profile?<sup>205</sup> These types of individuals will be of the younger generations who have entered the military and who have grown up using Web 2.0 platforms as a daily way of life. The analytically oriented type of future PSYOP professional will be those who know which Web 2.0 platforms are used to find out information about various products. They will be able to quickly realize if a product was found through a Google search or a discussion that took place on “LinkedIn Answers.”<sup>206</sup> Reach expansive will be those individuals who have large Web 2.0 personal networks. These can be found in the number of blog subscribers, Twitter followers, and

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<sup>204</sup> Brian Halligan and Dharmesh Shah, *Inbound Marketing: Get Found Using Google, Social Media, and Blogs* (Hoboken, NJ: John Wiley and Son, 2010), 170.

<sup>205</sup> *Ibid.*, 171.

<sup>206</sup> *Ibid.*

Facebook connections.<sup>207</sup> These individuals will have their own blogs, Twitter feeds, Facebook accounts and LinkedIn accounts and they are typically hired by private organizations who want to enhance their own marketing efforts. One example of this was American Express who hired Guy Kawasaki who at the time was already an author and entrepreneur who had 70,000 blog followers and 100,000 twitter followers.<sup>208</sup> Lastly are the content creators. These individuals should possess great writing skills on the level of a journalist. They should be able to post a blog article and measure the number of; “links it attracts, how many views it got, and how many comments it generated.”<sup>209</sup> Additionally, a content creator could be those personnel with a back ground in film who possess the necessary creative capabilities for online video production.<sup>210</sup>

A fifth criteria for finding the right type of Web 2.0 expert would be someone who possess the skills of a Public Relations (PR) specialist. An example of this type of PR-savvy individual would be someone who handles communicating a business’s public image. Someone who can think on their feet and field Q and A sessions using unique communication skills such as those found with a savvy lawyer or the press secretary of various government institutions. They understand the art of dialogue and the art of persuasive rhetoric. This also ties into the many-to-many communications that naturally take place in the Web 2.0 infosphere environment where one voice is amplified by the many.

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<sup>207</sup> Ibid., 173.

<sup>208</sup> Ibid., 173-174.

<sup>209</sup> Ibid., 174-175.

<sup>210</sup> Ibid., 175.



These necessary changes to not only recruitment, doctrine, and authorities will all fall in line with a new way ahead strategy that will need to be created in order to properly meet a decentralized Web 2.0 information environment and operate effectively and efficiently in it. The days of states having a monopoly on information are exponentially decreasing and a myriad of competitors are continuously increasing. A new information strategy that is tailored to the new dynamics of a multipolar Web 2.0 information world which is more about dialogue will be the best approach to protecting national interests.

## GLOSSARY

**Cognitive Dissonance Theory.** Incongruity among thoughts or mental elements and it is a negative, unpleasant state that occurs whenever a person holds two cognitions that are psychologically inconsistent. Additionally dissonance holds two clearly incongruent thoughts; makes a decision that rules out a desirable alternative; expends effort to participate in what turns out to be a less than ideal activity; or in general is unable to find sufficient psychological justification for an attitude or behavior he or she adopts.<sup>211</sup>

**Cognitive Misers.** Social psychologists have described people as “cognitive misers” who try to get as much information as possible out of as few cues as we can. In mediated environments, where there are so many blanks to fill in, people make more out of others’ small cues than we might face to face (Ellison et al., 2006). An ambiguous subject line, a single photograph, a short description, or a shared interest leads us to infer other information based on our stereotypes and assumptions about how social reality works.<sup>212</sup>

**Computer-Mediated Communication (CMC).** Interactive communication that uses technology as the primary means to facilitate conversations in order to create meaning. Computer-mediated communication (CMC) is used to inform, entertain, persuade, and allow others to connect. Some examples of CMC are posting comments on a blog site, sending a tweet on Twitter, and creating a video to post to YouTube. Other examples are found with Skype, Face Time and Facebook where CMC facilitates face-to-face dialogue over the Internet.<sup>213</sup>

**Flash Mob.** A group that engages in a type of spontaneous yet synchronized behavior or action. These events are initially formed with some type of instructions explaining when and where the group should appear, and what activity they should conduct once they have assembled. Another aspect to flash mobs is that they lack centralized control, although they are coordinated by some type activist group. They are meant to be harmless in nature yet attention grabbers.<sup>214</sup>

**Framing.** A form of communications where information is presented in a unique slant, focal point, or frame of reference. Additionally, as explained by communication researcher Robert Entman, framing “is to select some aspects of a perceived

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<sup>211</sup> Perloff, 322.

<sup>212</sup> Baym, 119.

<sup>213</sup> McGraw Hill Education. “Mediated Communication and Media Literacy,” Online Learning Center, August 17, 2007, accessed, June 17, 2014, [http://highered.mheducation.com/sites/dl/free/0073385018/537881/Pearson3e\\_Ch16\\_online.pdf](http://highered.mheducation.com/sites/dl/free/0073385018/537881/Pearson3e_Ch16_online.pdf).

<sup>214</sup> Clay Shirky, *Here Comes Everybody* (New York: Penguin Books, 2008), 165.

reality and make them more salient in a communicating text in such a way as to promote a particular problem definition, casual interpretation, moral evaluation, and/or treatment recommendation.” By simply varying the way a message is framed can strongly influence attitudes. Different versions contain the same facts, but they communicate the information through different frames of reference. . . . Frames work by accessing a particular perspective on an issue. Frames can activate mental frameworks, and when the mental frameworks differ in their implications for decision making, the results can be dramatic.<sup>215</sup>

**Information Communication Technologies (ICTs).** A term that encompasses unified communications such as instant messaging or unified messaging composed of voicemail, e-mail, SMS and fax. It is also a combination of telephony, video conferencing, interactive displays, and speech recognition. Additionally ICT is the integration of telecommunications through telephone lines and wireless signals, and the integration of computers and network hardware, and software.<sup>216</sup>

**Lattice Organization.** A lattice organization is one that involves direct transactions, self-commitment, natural leadership, and lacks assigned or assumed authority. . . . Every successful organization has a lattice organization that underlies the façade of authoritarian hierarchy.<sup>217</sup>

**Many-to-Many.** Describes the networked relationships and communications that take place through social networking sites. With the advent of sites like MySpace and Facebook the Web now fosters an environment where many people can communicate with many other people simultaneously. Everyone with access to social networking sites can post comments and share content on any given topic. Web 2.0 platforms foster this type of interpersonal and mass communication.<sup>218</sup>

**Military Information Support Operations (PSYOP).** Planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals. The purpose of military information support operations is to induce or reinforce foreign attitudes and behavior favorable to the originator’s objectives. Also called PSYOP.<sup>219</sup>

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<sup>215</sup> Perloff, 276.

<sup>216</sup> Kadushin, 9-17.

<sup>217</sup> Gore and Associates.

<sup>218</sup> Shirky, 87.

<sup>219</sup> Department of the Army, Army Doctrine Reference Publication (ADRP) 3-05, *Special Operations* (Washington, DC: Government Printing Office, 2012), 2-6 – 2-7.

Narrative Persuasion. A basic narrative is any cohesive and coherent story that is composed of an identifiable beginning, middle, and end that provides information about scene, characters, and conflict; raises unanswered questions or unresolved conflict; and provides resolution. Narrative persuasion is a narrative that is designed in a powerful way to specifically change beliefs and attitudes. This is done through facilitating “transportation” where the audience transports themselves into the characters or scenes of the stories they are observing such as through video or while reading a story on a Website. The viewers become psychologically transported or immersed into the story, and they begin to generate mental images of events that, while literally untrue, play out figuratively in their minds, inducing questioning of existing beliefs. An example of this can be found in the 19<sup>th</sup>-century novel *Uncle Tom’s Cabin* which was widely believed to have stirred the conscience of Northerners in the United States, helping to build the foundation for the Civil War. Additional examples of narratives for persuasion can be found in movies which are designed to change beliefs and attitudes.<sup>220</sup>

New Media. The concept of new media is that digitized content is available or accessible on any digital technological device at anytime and from any location. Content can be created in real-time, it can be compressible, it is unregulated and it is interactive. Content can come in the various forms of digitized video, digitized audio, digitized images, and digitized text. Other examples are found with the Internet, video games, CD-ROMS and DVDs, and analog broadcasts.<sup>221</sup>

One-to-Many. Describes one single platform for dissemination. Web 1.0 platforms fit within this model where one platform provide information to many who could view the Web page. Additionally, TV and radio platforms are other aspects of one-to-many where these single dissemination platforms broadcast information to a mass audience.<sup>222</sup>

One-to-One. Describes the type of communication between two individuals. This can be seen with a telegraph or email where one message is sent to another individual or a telephone where a conversation takes place between two people. Interpersonal communication between one individual to another individual through face-to-face also fits the one-to-one type of communication.<sup>223</sup>

Planned Behavior Theory. The theory of planned behavior postulates three conceptually independent determinants of intention. The first is the *attitude toward the behavior* and refers to the degree to which a person has a favorable or unfavorable

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<sup>220</sup> Perloff, 271.

<sup>221</sup> Rid and Hecker, 29.

<sup>222</sup> Shirky, 87.

<sup>223</sup> Ibid., 86.

evaluation or appraisal of the behavior in question. The second predictor is a social factor termed *subjective norm*; it refers to the perceived social pressure to perform or not perform the behavior. The third antecedent of intention is the degree of *perceived behavior control* which . . . refers to the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles.<sup>224</sup>

**Social Constructivism Theory.** Another technological theory that is associated with society's use of technologies. The theory explains that society is in control of the production of new technological devices and that society's behavior isn't changed by technological devices but rather the users are in control of the technologies they come in contact with. Essentially machines don't control its users the users control the machines.<sup>225</sup>

**Structural Holes.** This social network theory concept is inherent within all social networks. Within a dense network of likeminded individuals at some point an individual may begin to desire more than what the network can provide beyond safety and support. Some of this is associated with efficacy which is the pursuit of effectiveness or more out of life. Once an individual strives for more beyond what the network can offer then in effect he or she has created a structural hole within the network and in a sense has potentially created a weak spot.<sup>226</sup>

**Technological Determinism Theory.** A theory that is primarily concerned with how new technologies affect the users who use them, such as with the "impact-imprint" example. Sociologist Claude Fischer explains "impact-imprint," "According to this school of thought, new technologies alter history, not by their economic logic, but by the cultural and psychological transfer of their essential qualities to their users. A technology 'imprints' itself on personal and collective psyches." One example proposed by Fischer was "the speed of the bicycle and automobile, the instancy of the telegraph and telephone—transfer to their users."<sup>227</sup>

**User-generated Content.** Is the use of peep-to-peer technologies that facilitate the online contributions of private citizens and self-organized communities to compete with those of companies and governments. Examples of these are found with YouTube, a video sharing site; MySpace or Facebook, two social-networking sites where users can post comments or share images and video; Wikipedia, a collaborative encyclopedia; eBay, a person-to-person auction site; and countless

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<sup>224</sup> Ajzen, 179.

<sup>225</sup> Baym, 24.

<sup>226</sup> Kadushin, 29-30 and 59.

<sup>227</sup> Baym, 24-27.

so-called forums that allow individuals to publish their comments and distribute text, image, or video files.<sup>228</sup>

Web 1.0. A static version of the original World Wide Web during the 1990s and is associated with the rise of the dotcom bubble. Some experts termed this time period of the Web as “read-only web.” Almost all of the Web sites were created as a platform for presenting information to the various Web users. There was not any type of active communication or information flow that occurred with these various Web pages. Content contribution from various users did not exist.<sup>229</sup>

Web 2.0. An interactive concept to the Web that is associated with the dotcom bubble burst during early 2000. It is a shift from Web 1.0 that was static or “read-only” to a new Web 2.0 that is composed of various web pages that foster content creation and collaboration from various users. A new “read-write” version is found with Web 2.0 platforms such as with social media sites like Facebook where users post comments or content. Wikipedia is another content creation and editing site where users can update new information. YouTube is another Web 2.0 site where content creators can upload homemade videos to the site and others can comment on its content. Twitter and Flickr are other examples for micro-blogging and posting of images where others can contribute to the discussions. Lastly Web blogs are another example of the Web 2.0 era where citizen journalists can create their own blog and provide information on any given topic.<sup>230</sup>

Web 3.0. The next nascent version of the Web will be a “read-write-execute” Web composed of *semantic markup* and web services. *Semantic markup* refers to the communication gap between human web users and computerized applications. One of the largest organizational challenges of presenting information on the web was that web applications weren’t able to provide context to data, and, therefore, didn’t really understand what was relevant and what was not. The following attributes are going to be a part of Web 3.0; contextual search, tailor made search, personalized search, evolution of 3D Web, and deductive reasoning. By combining a semantic markup and web services, the Web 3.0 promises the potential for applications that can speak to each other directly, and for broader searches for information through simpler interfaces.<sup>231</sup>

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<sup>228</sup> Hands, 79.

<sup>229</sup> Scholz, 21.

<sup>230</sup> Rid and Hecker, *War 2.0*, 55.

<sup>231</sup> Flat World Business, “Web 1.0 vesus Web 2.0 vesus Web 3.0 vs Web 4.0 – A Bird’s Eye on the Evolution and Definition,” Wordpress.com, accessed March 6, 2013, <http://flatworldbusiness.wordpress.com/flat-education/previously/web-1-0-vs-web-2-0-vs-web-3-0-a-bird-eye-on-the-definition/>.

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